THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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Farm Husbandry.

PRODUCTION & CONSUMPTION OF MOLD IN SOILS.

Few subjects are more interesting than the natural laws which govern the production and consumption of organic matter in soils. By the terms "organic matter" the unlearned reader will understand a substance, which was once a part of some living vegetable or animal, and was organized by vitality.

On all lands covered with forests or other growing vegetation, the production and consumption of mold are constantly in progress. When production exceeds consumption there is of course an increase of vegetable matter on the surface of the earth. On the other hand, if from any cause the decomposition of mold is larger than the additions to it, a diminution of the amount of organic matter ensues.

The quality and agricultural value of mold depend mainly on the character of the plants by the decay of which it has been formed: and by the length of time which the vegetable debris has been washed and leached by rains, since the vegetables ceased to live. Plants and forest leaves that abound in azote or nitrogen, in sulphur, phosphorus, lime, potash, soda, magnesia and chlorine, yield a far richer mold than such as contain very little of the elementary bodies named. One hundred pounds of wheat, oats, corn, peas, beans, clover, and cabbage, will produce in rotting, better mold for all agricultural purposes, than a like weight of pine wood, rye straw, or other vegetable substance which is poor in bread and meat-forming elements. Common wood and all plants lose a portion of their earthy salts, (which appear as *ashes* when they are burnt) if long soaked in water. Old and long weathered cornstalks, grass and straw will have parted with more or less of their fertilizing atoms by protracted exposure. Hence, after plants cease to live and begin to decompose, the sooner they are plowed in, and mingle with the earth, the less they lose, and the more valuable they are to enrich the soil. The process of disorganization is governed by chemical laws as certain and uniform, as those which regulate the re-organization of the same or similar atoms, in developing the germs of a new generation of vegetable existences.

The elements of water, oxygen and hydrogen, which exist in all plants, separate and pass off faster in mold than carbon and azote. It is carbon, or the great element of coal and lamp-black, that renders muck and mold darker colored than were the vegetables, before they began to undergo any chemical change. Light, heat and moisture hasten the decomposition of all vegetable and animal tissues, and the consumption of their remains or mold on the surface of the earth. The same natural agencies equally favor the growth of plants, and the re-organization of mineral matter to serve as food for animals. The tillage and cropping of the husbandman, being purely artificial operations, are extremely liable to destroy the balance in organic nature, to the injury of the soil.

Tillage greatly promotes the decay of organic elements in soils, and the solution of the before nearly insoluble salts of silica, lime, potash, magnesia, &c., that furnish aliment to all crops. Vegetable and animal substances when rotting, evolve gases, which attack insoluble compounds of flint and lime, potash, soda and magnesia, and render all these minerals available to growing plants, which imbibe them through their roots, and fix them permanently in their tissues. In nothing is the wisdom of God more perceptible, than in regulating the solubility of mold and the minute particles of rocks, which together, form all the diversified soils on our planet. Without this admirable adjustment for hourly, daily and annually feeding plants, which in turn feed animals, both would soon cease to be on the earth. How shall we make plain to the comprehension of a child, the science of feeding plants—the art of accumulating bread, meat and fruit in the soil?

In 100 parts of fresh, lean meat there are 77 parts of water which may be expelled by drying. In 100 parts of perfectly dry beef there are 4.23 of *ash*, or incombustible salts. Muscle contains about 15 per cent. of nitrogen; and nearly 52 of carbon. The other constituents are oxygen and hydrogen, or the elements of water. Lean meat, like the seeds of cereal plants, contains sulphur, phosphorus, lime, iron, and all the elements required to form bones, brain, nerves, skin, &c. Hence, a dog or other carnivorous animal can subsist on lean meat, or on bread and water alone. A good cow extracts from the soil in her food, some 40 or 50 lbs of bone-earth, in the course of a year. Thirty pounds of this will be given in her milk, which will be sold, probably, in cheese, and the balance will be in her urine and dung. In 100 lbs. of wool there are five pounds of pure sulphur. In 100 lbs. of gypsum there are some 20 of sulphur. Gypsum aids in making clover, peas and beans, and they make wool; and old woolen rags will form rich mold.

For the same reason, clover, peas, and all leguminous plants, yield valuable food for a crop of wheat. But to begin at the beginning: How is a farmer to raise large crops of grass, clover or peas on *poor land?* The thing cannot be done without manure, or good ashes to furnish the constituents of the crops, which nature demands, and the soil does not contain. It is silly to believe for a moment that two tons of timothy or clover hay, or 20 bushels of wheat, can be organized out of *nothing*, or from any other materials than such as the Creator of all things has appointed for that purpose. So far as the subsoil possesses lime, potash, phosphorus and sulphur, deep plowing and subsoiling will render these elements available to cultivated plants. But on most soils, it will be found good economy to apply lime, plaster of paris, ground bones, salt, forest leaves, wood ashes, and all the manure one can possibly save, or make on the farm. There is just as much propriety in laying up raw materials for making wheat, corn and potatoes, as there is in having a crib or store house full of grain for making bread. Lands thickly set in grass and not injudiciously fed, nor mown, i. e. not robbed of their products, will gain from the subsoil and atmosphere, the organic and inorganic elements of human food and clothing. To scarify old pastures with a sharp harrow, sow more seed, and apply a top dressing of gypsum, is often followed with the happiest results. Similar treatment of meadows, or a top dressing of ashes, or one of lime alone, will greatly increase the product, in most cases.

It will not do to be ever removing grass in the stomachs of domestic animals from pastures, and hay and grass from meadows, and make no return. This is the right way to impoverish an estate, and render it comparatively worthless. Remember that, by improving land, you lessen the expense of raising every thing of a vegetable or animal nature which it yields. Very few men make the difference large enough between the price of poor, and that of good land. Every acre should be reasonably certain to give 50 bushels of corn and 25 of wheat. A plenty of lime, of potash, and of the mold formed by pea vines and clover, will achieve such a consummation.

If the surface and subsoil naturally lack lime, its sulphates, phosphates and carbonates—if the earth has a small allowance of potash, magnesia, soda and chlorine in its composition—it is unreasonable to expect large crops annually, which consume in growing, a good deal of these indispensable elements. Soils poor in alkalies and alkaline earths, must not be expected to yield much bread and meat per acre, no matter how large a quantity of swamp muck is added, unless lime, potash, phosphorus and sulphur are added also. Bones, gypsum and salt, or good wood ashes, will give rich mold, by the aid of clover, peas, grass or corn; and a mold rich in the elements of flesh and bones, will be certain to furnish the farmer with cheap potatoes, cheap bread and meat. In raising wheat, it is not desirable to have a soil largely stocked with organic matter. Hence, it is often better to have the 40 per cent. of clover voided in the dung and urine of sheep, evenly spread and distributed in the soil of a wheat field, than to plow in the whole crop without permitting any animal to feed upon it. In the latter operation, more than twice as much organic matter is added to the soil, as in the former. Whenever an agriculturist has reason to believe that a field lacks mold, he should grow crops and plow them in, rather than pasture it, or otherwise consume the vegetables that it produces. This will augment its mold.

DAIRY BUSINESS.

Our northern friends must look sharply to their cows, their pastures, meadows, root, corn and other forage crops; for Virginia, North Carolina, Georgia, and Tennessee are already in the field as competitors in the dairy business. There is not a State in the Union in which both cheese and butter can not be made. Like all other arts, that of rearing good milkers, keeping them well and cheaply, and at the same time manufacturing choice butter and cheese for market, demands experience, care and study. The operation is mainly performed in those seasons of the year, when all animal substances, like milk, whey, buttermilk, and curd, are extremely liable to chemical changes which injure the products of the dairyman. Only a small portion of the butter and cheese made in the United States is really first rate. And why not? The milk is good when drawn from the udder, but it is badly handled ever after. Less attention is paid to keeping milk pails, pans, churns, cheese tubs or vats, perfectly sweet and clean than is required to secure the best results. Butter when taken from the churn is not properly worked over; nor salted with pure salt; nor protected from the influence of atmospheric air, as it should be. The germ of that peculiar change, known by the common name of "frowy," is early planted in a mass of butter, although undeveloped for weeks or months.

Butter and cheese which are put up wrong, if kept any time, will never come out right. The changes which they undergo present a subject for close and curious study. As in curing meat, good salt, pure air, and the entire exclusion of oxygen from butter in kegs, and cheese in a well oiled, impervious rind, are the leading matters to be attended to. In cheese-making, the heating of the milk, the condition of the rennet, the quantity used, and the quantity of salt, the degree of pressure on the curd, the time for it to be in press, the turning of cheese, surrounding with cloth, &c., &c., are all details of great importance. To incorporate into the cheese all the casein (curd) and butter which the milk contained, and preserve both sweet and delicious with aroma, peculiar to each, are the objects to be attained. Keeping milk too long, bad skins, using too much rennet, too much scalding, impure salt, excessive pressing, neglect in turning and oiling, and an offensive atmosphere in the dairy room, are among the most common causes which injure cheese.

Butter is damaged by permitting cream or milk to stand too long before churning; by the defective working out of the buttermilk; bad salt; and too long exposure to the atmosphere before it is packed down in crocks or tubs. Keep the air from your butter as much as practicable.

Plant carrots and corn in drills for your cows; and see that they are milked regularly and clean. A little labor will often produce a good crop of pumpkins. The main point is to raise a full supply of good food, and take are to husband all their manure as well as other products.

Keep Bees.—Bees cost nothing for their food, neither for their pasturage in summer, nor for their provisions in winter.

ECONOMY OF FARMING.

BY AGRICOLA.

In every department of industry, except that of the farmer, special effort is made to cheapen the expense of producing articles of manufacture. This has resulted in diminishing also the price at which articles are sold, though the profits to the manufacturer, from the extensive sale of his articles, are larger than formerly. Why then, may it not with propriety be asked, does the farmer in most instances continue in the beaten track of olden time, instead of availing himself of the facilities which have been furnished him for cheapening the cultivation of his farm? How many farmers content themselves with a preparation for a single crop, instead of adopting a system of manuring that will, by a proper rotation, be available for a succession of crops. How little attention is given, after all, to systems which have been adopted, by which the products of many farms have been largely increased, and the expenses of cultivation, by the use of improved implements and the right use of manures, have been very materially lessened.

Now it must be evident, that any farmer who does not avail himself of the means within his reach, and thus economise the expenses of his farm, is pursuing a course that must result in great loss, and in permanent injury. It may be said, and doubtless truly, that this deficiency arises from want of information. But are not our agricultural journals published at such rates as to bring not only one, but several within the means of every farmer? and can it be excusable in a farmer, to make his ignorance his apology, when the necessary means of information are placed within his reach? Our farmers read far too little of what is going on in the world around them. In the pages of our agricultural journals, in the proceedings of our agricultural societies, information is afforded that would enable one of these farmers greatly to increase his income, while at the same time his farm would be rising in value and increasing in fertility. Let me then urge upon the farmers of our country to patronise liberally the agricultural press. Give to their columns the results of experience on their every farm—add to the usefulness of these works by contributing the results of their observations—and thus make these papers what the editors desire them to be, the repository of the experience of practical farmers. Were this done, I doubt not, economy in the management of the farm would prevail every where, as it now does in comparatively few localities.

In addition to this let the farmers unite in town, county and State associations for the improvement of agriculture. Here a farmer meets his brother farmer, canvasses the methods of farming pursued, hears what others may advance in favor of new methods of cropping and culture; his own mind is quickened, his desire for improvement is aroused, and I hesitate not to affirm, that an advance will result from this intercourse. The mind of the farmer must be aroused—he must become a *thinking* as well as a working farmer—and whoever knew the thinking, reflecting farmer who was not, in the main, a successful one? Encourage also the introduction of agricultural education into schools—and the establishment of institutions for the especial benefit of the agricultural class. Why should not this be done? Do they not deserve this at the hands of their legislators? Shall it be said, that the farmer who feeds all, who mainly contributes to the support of government, is not entitled to any special effort to enable him to rightly improve his mind for the noble pursuit which he has chosen? I will not for a moment believe, that this subject will be permitted to sleep, after the farmer shall have examined it at his fireside, with that attentive consideration which he gives to the matters that ordinarily are the subjects of examination. The result of this, if carried out, will be a better race of farmers—more perfect management of the farm—better husbandry and better crops; in short, economy in farming will be produced—diminished expenditures and increased returns.

Much might be accomplished towards attaining the object suggested, *economy*, if the farmer should become as systematic in his accounts with his farm as he is with individuals. I am pleased to learn that many of our farmers are adopting this system in their operations. Not long since I was permitted to look at a farmer's account for the year—and I found a statement, with all the necessary facts to substantiate it, of the expense of all his crops—that is, what each had cost him per bushel. Thus, wheat 38 cents, oats 13, barley 29, beans 37, &c., &c. Now who cannot see, that this farmer can at once determine whether the course he is pursuing is the one best for his interest, or whether a change is necessary?—and if so, he knows where to make it. I would press this matter home to every farmer. Be systematic in all your operations, and thus you will be enabled to decide at once which course is best for you to pursue.

I would urge upon every farmer who makes the production of grain his leading object, to pay particular attention to the cleaning of his lands. Let this be attended to with the most scrupulous care; give to your grain all the nutrition the land can yield, and let not the weeds interfere with its full development, and you will be satisfied with the result. This is a matter far too little attended to in this country—and yet upon it depends the complete success of the farmer in raising grain. He may manure thoroughly, his seed may be good, his land thoroughly pulverised, yet if he neglects his crops, and suffers the weeds and grass to usurp a portion of the nutriment from the soil, a diminished crop will convince the farmer, that a wise economy has not attended his operations.

While improvements (so called) are often made at an expense that far outweighs the return of the crops, the farmer hearing of them is led to say, it is useless to make the attempt, for it will be ruinous; but if he will for a moment reflect, that this is *not improvement* which leads to such ruinous results, but improvement means *increased products* at *diminished expenditure* in cultivating the soil, by the aids of improved implements and machinery, and a careful husbanding of the manure of the farm. And is not this desirable, is it not attainable? I greatly mistake, if the farmer will carefully follow out the suggestions herein made, with such other aids as experience has shown to be useful, he cannot fail of success, and in the end will learn the true secret of success, in the *economy of the farm.*

Cure for Founder.—"The seeds of sun-flowers," says a correspondent of the Zanesville Gazette, "are one of the best remedies known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will effect a perfect cure."—The seed should be given as soon as it is discovered that the horse is foundered.

BONE-MEAL FOR COWS.

[From the Massachusetts Plowman.]

MR. EDITOR—Sir: Being a reader of your excellent paper, I have often seen questions from your correspondents about various subjects connected with agriculture, which I have seen answered satisfactorily. My father has a valuable cow, which gives an abundant supply of rich milk, and which is, in all respects, a good cow. I noticed the past summer, in driving it to and from pasture, that it would eat bones that she found by the road-side, and also, this winter, I have often found her eating them, and have prevented it, when possible. It does not seem that it is the want of salt—for she has had most of the swill from the house, and also salt, occasionally. If you can tell me the cause, and if hurtful, the preventive, I shall be very much gratified.

Yours, truly, N. P. B.

Hopkinton, March 19, 1849.

It is supposed by many that cows are fond of bones because they require something of that nature to restore what they lose when they give milk. Milk is the article that nature has provided for young animals whose bones are forming and growing; and it is found to be the best article they can have.

Now a cow that has come to maturity can afford to yield up some of her milk without injury as her bones are already formed. Yet she may yield such an abundance of milk as to injure her own carcass. We find some cows running to milk, as the phrase is, and becoming poor in flesh while they are yielding large quantities. Such cows are more liable to suffer from disease or derangement of the system than cows that give but an ordinary quantity and incline to flesh. The garget in particular, which always affects the udder, is always found to be most troublesome in cows that yield large quantities of milk.

This is the theory—that great milkers injure their bones by parting with too much that is needed to supply the natural waste of bone. Now, as to the remedy—*bone meal* has been used on the supposition that it might supply the waste occasioned by the great yield of milk. And a number of farmers in Essex county who have tried it have reported to us that they found the remedy effectual. Bone meal is now kept in Agricultural warehouses for the purpose of restoring cows that hanker after bones.

No harm will result from eating any bones that are found in the street provided they are well ground by the cow before she attempts to swallow them. Any bones may be pounded fine with a sledge hammer and given to cows. Or the meal may be obtained in this city.—*Editor Plowman.*

REMARKS:—The above relates to questions of great practical and theoretical importance. The early readers of this journal need not be informed how often and earnestly we have urged upon the attention of the Agricultural community, the value of *bone earth* in all soils, whether used as pastures, meadows, or grain lands. The amount of phosphates which is annually wasted in the dung, urine and milk of animals in this country, is infinitely larger than is generally supposed. The elements of bones are not abundant in ordinary earths; hence their loss, no matter in what shape, is a serious calamity. In the bread, meat, milk, potatoes and other food consumed by the human family, there is a prodigious waste of valuable phosphates and sulphates of lime and magnesia, under the present customs of society, without any fair excuse whatever. As the country becomes older and its cities and villages more populous, the necessity for saving night soil increases, whilst the quantity extracted from cultivated lands and lost is equally augmented. Pursue this system of robbing the soil of the elements of bones one or two generations longer, and not only cows but children will have to eat bones to satisfy the demands of nature to repair the distorted, enfeebled skeletons within them. When a child, a calf, a colt or a lamb can organise its frame-work out of iron, then it will do to waste the phosphate of lime in the excretions of animals.—ED. GEN. FARMER.

THE PLOW—ITS HISTORY AND IMPROVEMENTS.

BY HORACE L. EMERY.

FRIEND MOORE:—I send you herewith brief descriptions of some of the modern plows.

Among the various forms and kinds, I would first describe that called the "*Swivel Plow*," or by some the "*Side Hill Plow*," (Figure 1.) This is so constructed that the mold board is suspended upon pivots, by which arrangement the mold board can instantly be changed to the right or left side of the beam—thereby, forming a perfect plow at the pleasure of the operator, which will turn furrows either way.

This is an important invention, and the best now in use for the particular purpose for which it was originally designed, viz: for turning furrows down the sides of hills—thereby requiring less team—doing the work much better, and what is most important, this method of plowing prevents all washing of side-hills by heavy rains, &c. This plow has recently been so much improved in form as to work equally well on level lands, as the furrows may all be turned one way, avoiding all dead furrows and ridges when desired. It is also useful in working roads, plowing from fences, &c. The credit of this *invention* belongs to J. RICH, and the plow has always been known as *Rich's Swivel Plow*. The accompanying cut is a correct representation of the plow.

Another plow for the same purpose is in use to a considerable extent in this State, which is formed with a right and left mold-board combined, and the beam so attached to the irons as to be readily made to vibrate from side to side—the main bolt through the beam forming the pivot—when the hind end is moved quite to one side, one mold-board being nearly in a plane with the furrow, it forms the land-side, while the other mold-board turns the furrow slice, and *vice versa*. This answers a good purpose. It is however a better plow for ridging and ditching, as it can be made to turn two furrows, one each way, simply by confining the hind end of the beam, midway between the mold-boards. This was invented and patented by BARNABY & MOOERS, of Ithaca, N. Y.

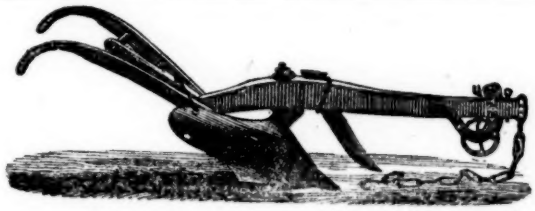
Another kind of plow for ordinary kinds of work is extensively used and well approved by farmers in the interior of the State, which is known as the "*Wheel Plow*." This derives its name from the fact of its being formed with a revolving landside, thereby producing a rolling, instead of a sliding friction. In other respects the plow differs little from other kinds in general use. In theory, by the use of the revolving wheel landside, a saving of power is obtained—and in fact it is the case, when and where the bottom of the furrow is compact and hard enough to sustain the weight and pressure of the plow upon the wheel, without being indented; but whenever the earth is mellow, and constantly giving way to the pressure of the wheel, this saving of power is more than counterbalanced by the increased resistance to be overcome. The more complicated construction, and the constant wearing of the axis and revolving parts, has retarded its very general introduction.—The plow, however, is thought highly of by many of the best farmers in the central part of the State. It is the invention of T. D. BURRALL, of Geneva.

Another kind now in use to a great extent in some sections of the country, is known as the "*Self Sharpening Plow*," (fig. 2.) These are so constructed that the *point* and *wing*, and front or top of share, are three separate pieces—each piece so formed as to be capable of being reversed several

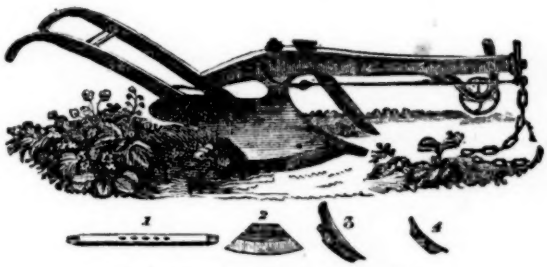
times as they wear away; these have been found to be cheaply kept in order, and when the land is free, have been sufficiently strong, notwithstanding their complex construction. They have recently been improved, and wrought iron substituted in place of cast metal, with steel points and edges—thus making them equally strong as any other plows—and by being newly laid by any ordinary blacksmith, once in a year or two, the plow can be worn out without being dependent upon distant furnaces for repairs. The various improvements in the Self-Sharpening Plow have been made by several different persons, at different times during the past ten years: but the most important has been that of substituting wrought iron and steel in place of cast metal for the wearing and exposed parts, which last belongs to, and was patented by, RUGGLES, NOURSE, & MASON.

With the *Sub-Soil Plow* I will close this communication. When the advantages to be derived from the use of the Sub-Soil Plow are known, very few good farmers will think of cultivating their farms without one. On many farms which have become impoverished by surface culture, and become unprofitable, the use of this plow will renew the soil, and to a great extent produce the effect of manures, &c., by restoring to them their original fertility. Were this the only advantage to be derived, its use should be no longer delayed; but when it serves as a drainer to receive the surface and surplus water, and also to open the soil to a greater depth to receive the roots of plants for food and moisture, and to admit a rapid passage of moisture upward from a greater depth—thereby avoiding drouths in dry times and extreme wet in early spring and heavy rains—its utility can no longer be questioned. Since their introduction to this country from England and Scotland, they have been much simplified—retaining at the same time the original effect in operation of the most approved imported plows. They are afforded here at less than one-fourth the original cost.

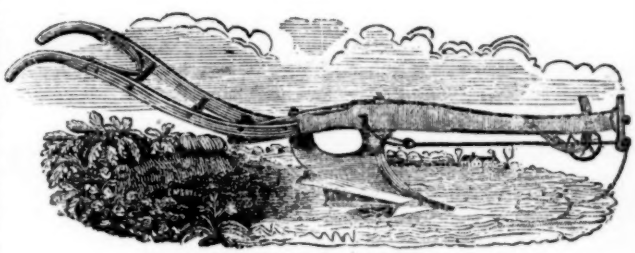
The above cut (fig. 3) shows the plow, which is so constructed as to follow in the furrow of an ordinary plow, and break and pulverize the soil to any depth required, without bringing any of the sub-soil to the surface, but leaving it where it is; and the next round of the common plow covers this sub-soil so loosened, and so on through the field. It is also found of great benefit to grass lands (where the water stands late,) by plowing through the same once in two to four feet, in the direction of the run of the water; this, by forming small blind drains, carries off the surface water much earlier; and if this is done in the fall, it prevents the injurious action of the frosts to a great extent, the land becomes settled earlier, and a heavier and larger growth of hay is obtained. In view of these evident advantages, no farmer should do without a good Sub-Soil Plow.



(Fig. 1.) *Swivel, or Side-Hill Plow.*



(Fig. 2.) *Self-Sharpening Plow.*



(Fig. 3.) *Sub-Soil Plow.*

It was originally my intention to have described several other kinds of plows in use, as the *Eagle Plow*, the *Diamond Plow*, the *Peekskill Plow*, the *Center Draft Plow*, &c., but my time will not now permit, and beside the public are already familiar with them. The subject of the draft of plows I will take up, and perhaps send you a communication upon it. Probably no one thing about the plow is less correctly understood, not only by the farmer but by the plow maker, and also the committees selected to judge and test the merits and demerits of the different kinds. *Albany, N. Y., April*, 1849.

MESSRS. EDITORS:—Will you or some of your readers give us, through the Farmer a description of a wind mill of about one man power—or a power sufficient to churn, wash, turn grindstone, pump water for stock, &c.? One that will be simple in its construction, cheap and durable, and that will preserve a uniformity of motion in our Western New York breezes as nearly as possible. If it does not oblige thousands of your readers, it will your friend in

VAN BUREN.

THE industrious are seldom criminal, but the most of those who yield to guilty enticements, may trace their lapse from rectitude to habits of idleness.

THE PRINCIPLES OF BREEDING.

BY S. P. CHAPMAN.

The first great axiom laid down by nearly all writers on this subject is that "like produces like." This indisputable law of nature is seen in every thing both animate and inanimate that has the power of reproduction throughout the entire universe. But while this fact is universally acknowledged it is also equally well known that the union of two different substances often produces something differing very much from either. This law governs the animal as well as the vegetable and mineral kingdoms. By the union of two animals the produce often differs in form, color and appearance from either—sometimes being superior and at others inferior, according as the skill and judgment exercised in their selection has been wisely applied or the reverse.

To breed from two animals so that the produce shall be superior to either requires no small amount of judgment and experience. But it is evident this has been accomplished, else we should have had no improvement. It is very easy to *improve* so long as we can obtain a sire *superior* to the other portions of our herd; but when we have raised our entire stock equal to the best animals we now possess, must we then cease our exertions; or are there certain grand principles which, if correctly carried out, will enable us to continue that vast improvement which has already effected such great changes? We for one are far from supposing that any of our domestic animals have as yet reached their highest state toward perfection; on the contrary we believe they have but just begun to advance in improvement. Who that lived a century since would have supposed that from the animals then in existence we could have produced our present excellent improved stock?—and who can tell what our best breeds may become one hundred years hence?

The first thing an individual should do in order to become a successful breeder is to establish in his own mind what he deems to be perfection, as regards the animals he is breeding; for without some definite object in view it is evident but little can be accomplished. In order that he may entertain correct views it will be necessary for him to give the subject much study and observation. He should then select for the foundation of his herd those animals that approach nearest this standard of perfection. It is not probable that he can find animals that will entirely suit him. They will all have some little defects. How is he to eradicate these defects and preserve their excellencies. It can only be accomplished by long and steady perseverence and great care in the selection of his breeding stock.

If, for instance, we have a cow possessing many valuable qualities but deficient in some important point it is not enough to insure improvement in the produce that we should breed her to the male possessing this point in perfection. In the first place to calculate on any thing like success we must ascertain that the male *inherits* this excellency. We must then see that he has no defects which he will be likely to stamp upon the produce. He will, without doubt, be deficient somewhere. Is the cow perfect where he is deficient, and does she *inherit* this perfection? If so, we may calculate we have the right materials for improvement. Every defect in the male should be counterbalanced by a corresponding *hereditary* excellency in the female and *visa versa*. One great reason why some individuals are not more successful as breeders is, they do not study the animals they breed from. They possess perhaps a very good sire, and their cows are better than an average. But after several years breeding they find their stock have deterioated instead of improving. The reason of this is that while they have retained in some degree their former excellencies they have been breeding animals together both of which have been deficient in some one and the same important points, and they have been in fact *establishing defects*.

This is one of the great objections to the "in and in" system of breeding. The animals being descended from the same family are likely to possess the same defects, and by a union of like defects, it is evident we can never create an excellency. On the other hand by bringing together animals of different families, we have a greater chance to obtain those whose defects and excellencies will in a great measure counteract each other. If it were possible to obtain *perfect* animals and have them descended from *perfect* ancestors for years back we think there would be no danger of breeding "in" for generations to come, and we presume all the produce would be perfect. We do not, however, know of a *perfect* cow, or bull, and any individual possessing both might amass an ample fortune.

We would here say a few words as regards the raising of animals in connexion with their breeding, and that is, that they should be *well fed*. It matters not how good animals we may possess, we can in a few years ruin them by neglect, and almost starvation. All young animals should be kept just as well as they possibly can be without becoming *fat*. We have known young animals ruined by over feeding, and we have known of many more spoiled by starvation. The safe and most judicious course seems to be to adopt the medium as we have before stated. The young animal is then more healthy, will attain a greater size at maturity, and will have a firm and more perfect appearance. *Clockville, Madison Co., April*, 1849.

SELECTING INDIAN CORN FOR SEED.

BY CALVIN E. HILDRETH.

Messrs. Editors:—I believe there can be an improvement made upon Indian Corn, by a proper selection of seed. About ten years ago it was a rare chance to find an ear of corn with fifty kernels in one row of the eight rowed variety. The same variety I plant now, and can find ears that will have fifty-five and sixty kernels in one row.

The way I selected my seed was this: I took the longest ears that were not filled out at the top end, believing that an ear of corn that was filled out over the end would grow no longer; and selected from year to year those ears that were not filled out, and small at the butt. I have ears that have fifty-six or eight kernels in a row, and the cob one inch in diameter at the butt and not filled over the end. The length of the longest ears is from ten to twelve inches. I have from fifty to sixty bushels to the acre in this climate. No doubt a great improvement might be made in four or five years, by close application, on a small scale.

If you think the above will be of any use to your readers, you may publish it. *Raymondville, St. Lawrence Co., N. Y.*, 1849.

The above suggestion is in season, and worthy of particular attention.

HARROWING WHEAT IN SPRING.

BY MYRON ADAMS.

MESSRS. EDITORS :—In none of the improvements in agriculture do I find farmers so *slow to believe* as in harrowing wheat after the ground has settled in the spring. Some ten or fifteen years ago much was said on this subject in the Genesee Farmer, showing the results of experiments and explaining the reasons why it should operate beneficially upon the crop.

Farmers know that a hard crust forms upon ground exposed to the frosts and drying winds of March and April, and that this crust greatly retards vegetation. But the great objection is, it will pull up all the wheat to harrow it. Having practiced harrowing my wheat every spring for the last eight or ten years, and uniformly with good effect, I feel disposed to recommend the practice to my brother farmers. Of late years I have been in the habit of plowing in my wheat at the time of seeding with a gang plow, leaving it in the furrow. In the spring after the ground has become dry, the last of April or early in May, I harrow lengthwise of the furrows, then crosswise, loosening up the ground thoroughly. I should like to do this just before a rain. If the land is to be seeded with clover, I sow on the seed and harrow it in. This I think far more safe than sowing early and trusting to the heavings of the frosts and the wash of rains to cover it. Early sown clover is often killed by the drouths so common in April.

I have been amused at the earnestness with which some of my neighbors would remonstrate with me for harrowing my wheat. "Such a fine piece of wheat" say they, "to be spoiled in that manner; he ought to be sent to the mad house."

And afterwards, when the crop showed for itself it was not ruined, "Oh, it was such a good piece of land it will produce a good crop in spite of your experiments." A field of wheat looks bad while under the process of harrowing, as it is prostrated and partly covered with earth; but after a shower it starts up fresh and vigorous like a field of corn refreshed by a shower after being hoed. I have often examined as to the amount pulled up, and do not believe it will average a bushel upon ten acres. Farmers try it: and be not frightened by the appearance. I never yet heard of a field injured by it.

East Bloomfield, N. Y., April, 1849.

SALTING STOCK.

BY J. H. BEECH, M. D.

MESSRS. EDITORS :—A correspondent of the Farmer some time ago offered some speculations about salting stock—questioning the utility of the practice, and asking for actual experiment. Believing the question important, and that sufficient time has elapsed for those better qualified to have given details of experiments, if they had previously made any in that line, or to have given an answer on scientific physiological principles, I have no apology for writing, provided I succeed in making my article worthy your publication.

The animal system has no power to create any of the elements of flesh, organised tissue, or salutary secretions. But the organs of nutrition and assimilation have wonderful power to modify the chemical constituents of the animal body, into a part of that body, when they are supplied. Healthy, perfect animals cannot be raised, or kept unless all the various chemical constiuents of bone, meat, fat, &c., are furnished in food, or drink, or in the atmosphere they breathe. Combinations of gluten, starch, oil, &c., found in the food of herbiverous animals, supply much of the material for organized tissue, and fat; and abundance of carbon for the purposes of respiration. But a variety of mineral substances, are equally necessary, to wit: phosporus for the formation of nervous tissue, bones, white and yolk of eggs, and milk. It is furnished in the grasses and seeds of plants. Sulphur exists in flesh, eggs and milk. It is found in most spring and river water, and in some plants with their azotized compounds. Lime is a well known ingredient in the animal structure. It is equally abundant in the vegetable kingdom, and in all hard water. Iron is a "*sine qua non*" in red blood, animal flesh, yolk of eggs, and milk. It is supplied in some water and in many vegetables.

Common salt is no less important in the animal economy. It is contained in flesh, in the egg, in milk, and other fluids. It is a combination of muriatic acid and soda. The first named, is essential to the gastric juice, making it a ready solvent of many substances which would otherwise be useless to the purpose of assimilation. Soda is necessary in the production of bile. Common salt is scarcely found in plants, except such as grow in salt marshes, *salt licks*, or sea water. This deficiency must be supplied. Instinct and appetite impel wild animals to seek such marshes, and licks, where they choose the raw material in the most concentrated form they can find it. Domestication prevents animals from obeying this desire, and renders it our duty and interest to mingle it with their food or treat them regularly with this luxury, as their actions prove they esteem it.

By the advice of some old farmers I have fed my pigs with salt freely and regularly, especially while fattening, for four or five years; and am satisfied that it is of great service in giving permanency to the appetite and solidity to the flesh,—besides being well paid for expense and trouble in grateful grunts, and smacking chops. *Gaines, N. Y.*, 1849.

FEEDING BARLEY TO PIGS AND EWES.

I SAW in the Farmer, some time since, a recommendation for feeding ewes that had lambs, barley meal. I wish to ask if any of the readers of the Farmer have tried the experiment; and if they have, what has been the result? It has a very bad effect on sows that have pigs—drying up their milk and eventually starving the pigs. Likewise, barley straw and barley beards will dry up milch cows.

In regard to sows and pigs, one circumstance has happened under my observation. A farmer had a fine sow which had a nice litter of pigs, and he thought he would take extra trouble and have nice hogs. He had some barley ground and he gave the meal to the sow, and if he had not left off feeding it as he did he would have lost all. He made out to save two or three out of the litter by feeding other slops.

Yours, &c., ARISTA.

WILL some of our correspondents respond to the above inquiries?—[ED.

VERMONT SUGAR.—The Green Mountain Freeman says that the "amount of maple sugar made annually in the State of Vermont, according to the best estimates we can obtain, is about five millions of pounds."

CULTURE OF FIELD BEANS.

MANY of our farmers would find it advantageous to cultivate a few acres of field beans, and as the season for planting the crop is approaching we direct attention to the subject. A friend states that he raised a very profitable crop the past year—and, though his land is well adapted to wheat, he thinks beans pay quite as well, on a small scale. In most localities the crop brings a fair price—from $1 to $2 per bushel; rarely if ever less than the former.

The crop thrives well on a quick dry soil, finely pulverized; but if inclined to be wet, the land should be ridged. The seed may be put in any time this month, after the danger of frost is past. Do not plant in a cold wet time, as the seed will be more liable to rot; the ground ought to be well warmed by the sun, before planting. Bush beans are the only ones used for field planting, and of these there are several kinds. Among others the long garden beans, white, red or mottled, are known as great bearers, of good quality, and mature early.

Relative to the culture and produce of this crop, Judge BUEL says:—"Beans may be cultivated in drills or in hills. They are a valuable crop, and with good care are as profitable as a wheat crop. They leave the soil in good tilth. I cultivated beans the last year in three different ways, viz., in hills, in drills, and sowed broadcast. I need not describe the first, which is a well known process. I had an acre in drills, which was the best crop I ever saw. My management was this: On the acre of light ground, where the clover had been frozen out the preceding winter, I spread eight loads of long manure, and immediately plowed and harrowed the ground. Drills or furrows were then made with a light plow, at the distance of two and a half feet, and the beans thrown along the furrows about the 25th of May, by the hand, at the rate of at least a bushel on the acre. I then gauged a double mold-board plow, which was passed once between the rows, and was followed by a light, one-horse roller, which flattened the ridges. The crop was twice cleaned of weeds by the hoe, but not earthed. The product was more than forty-eight bushels by actual measurement."

KEEP THE SWINISH MULTITUDE AT HOME.

MR. MOORE:—The suggestion of your correspondent H. Y. that communications should be appropriate for the season, I think a very good one, and would suggest to your readers, as I think this is the proper time, that if they wish to promote a public good—to turn money into their own pockets—to cultivate a friendly relation with their neighbors—to contribute their mite to the promotion of a correct rural taste—to abate a very great nuisance—and to appear at the bar of judgment with a clear conscience, and not meet any of their neighbors there as witnesses against them: That this spring, just before they turn their swine into the highway without any wires in their noses, they put some in and turn them into the pasture where they can find them at feeding time; and thus save the poor creatures the trouble of carrying sore ears, and going on three legs, occasioned by the help of their neighbor's boy and dog in an ejectment from his fields. Yes, we say, commence the spring of 1849 anew; turn the pigs into the pasture and save law suits, and save the green grass by the side of the road which adds so much to the beauty of a farming district, and keeps out noxious weeds,—for we all know that where the turf is rooted off, the seeds of weeds will lodge and grow.

If we were to judge from appearances, we should think that, in some neighborhoods, swine were the only highway laborers, and that they labored most assiduously too; not however to make the passage over the road smooth and agreeable, or to make the prospect interesting. It is almost sickening, certainly revolting, to see how some roads are turned up by half fed swine. Half fed, I say, for full fed would be at home at rest. What right has my neighbor to turn his pigs into the road, and compel me to watch them, and to save my crops, fence against *hogs* of the smallest dimensions? Would he not be liable for trespass if his pigs come and root up the grass plat in the road before my door as much as if he should take a hoe and dig it up himself? What the law is I do not know; but if our country laws are all right our *country practices* are not. But a man that will not do right only as the law compels him, I like to have said, ought to have a wire in his nose and be turned out with his pigs, for they all resemble each other in hogishness. If farmers must pasture the highway, sheep are much less objectionable, if they will not get over fence. They do not deface the road, are not so liable to creep through fences, and are more timid and more easily frightened from mischief. I would by no means, however, recommend turning any animal into the highway, for they will, in spite of all the good wishes of their owner, molest his neighbors.

In looking over the above I find I have directed my suggestions to your readers. I beg their pardon. It is not the readers of "The Genesee Farmer" that are in the fault. It is generally those who will not read—those who "know enough" without reading the Farmer. But I would suggest to them that they use their influence to get their neighbors to abandon this nefarious practice of *swining* the road; or to get them to take, and *read* the Farmer, and if there is any pride or spirit of emulation in them they will abandon it voluntarily.

Mr. Editor you are at liberty to do with this just what you please. You can publish any, all, or none of it, and it will be all the same with your friend in

VAN BUREN.

Onondaga Co., N. Y., March, 1849.

CARROTS.—On 270 square feet of ground I raised 10½ bushels of carrots, weighing 47⅛ lbs. to the bu.—making 494 9-16 lbs. At the same rate per acre it would amount to 79,833⅛ lbs., nearly 40 tons—some below the amount stated in last number, as the writer supposed might be raised on an acre. The largest carrot weighed 4¼ lbs. They were the first carrots I had ever raised, and I took pains with them to satisfy myself as to the profit, and the amount that could be raised on an acre. The soil was clay; it was well manured; seed sown in drills one foot apart, and the plants were thinned so as stand about four inches apart.

While preparing the ground an old gentleman remarked that I would not harvest two bushels from it; but in this case the "debts were paid" to the soil, as suggested in your August number. Let S. P. C.'s advice be adopted, and bountiful crops will be our reward. J. I. S.—*Alexander, N. Y., April*, 1849.

PLASTER—PLOWING UNDER CLOVER.

MESSRS. EDITORS:—It is well known that the farmers in this part of the State use plaster quite extensively, and value it very highly. The effect of plaster upon clover, corn, potatoes, &c., on gravelly soil, considering the amount applied, is truly wonderful and surprising. The increase in the yield of these and other crops, by the application of a bushel of plaster per acre, is oftentimes doubled, and even trebled. Notwithstanding the great and extraordinary increase of crops it produces, many farmers are skeptical as to the utility or economy of applying plaster to the soil, believing it will have the effect in the end of destroying and rendering utterly worthless their farms. And my object in penning these lines is to inquire your opinion upon this point—Whether plaster does injure the soil? and if so, does the injury result from the application of plaster to the soil?—or does it exhaust the soil merely from the great increase it produces in crops?

There is another inquiry upon which I should like your opinion. Is it for the interest of farmers who own small farms, and who wish to keep up, and enhance their productiveness by plowing under clover for sowing winter grain, to plow it twice—once just before the clover is fit for mowing, and again before sowing, or mow it once and then plow in the second crop just before sowing? If you will answer these inquiries, it will be satisfactory and conclusive to all concerned. A SUBSCRIBER.—*Aurora, N. Y.*, 1849.

REMARKS.—That the use of plaster has a tendency to deteriorate and exhaust the soil, is a most ridiculous assumption. Its action is to fix and retain the ammonia of the air, rains, and snows—which in itself is an important assimilating agent of all plants. Gypsum is composed of sulphuric acid and lime, and ammonia of nitrogen, (which composes four-fifths of the atmosphere, and combined with plaster is nitre or salt petre,) and hydrogen, one of the constituents of water. In the mutual action and decomposition of gypsum and ammonia, results are produced and agents developed, important to the process of vegetation, and in which the value of plaster is supposed to reside. But if the farmer wholly depends upon the application of plaster to keep up the fertility of his land, without rotation, rest, and the requisite green or stable manure, his lands will run down and become sterile and barren.

For a clean clover and timothy ley, devoid of foul grasses, it is our opinion that once plowing on or before the first of September, turning under about five inches in depth a good second crop of clover, is the best and cheapest method that ever wheat was cultivated—while a saving of one crop of hay and two plowings is made. It will not show as luxuriant in the fall as the regular summer fallowing, but when fermentation of the buried vegetable fibre commences in the spring, it brings up with a rush.

TO DRIVE AWAY RATS.—MR. CHARLES PIERCE, of Milton, pounded up potash and strewed it around their holes and rubbed some on the sides of the boards, and under parts where they came through. The next night he heard squeaking among them, which he supposed was from the caustic nature of the potash which got among their hair and on their bare feet. They disappeared, and he has not been troubled with them since that time, which was nearly a year ago.—*Boston Cultivator.*

BLACK LEG AMONG CATTLE.

MESSRS. EDITORS:—We have a disease among our cattle in this vicinity, which always proves fatal. We can neither tell the cause of it, nor do any thing which will give relief. It is called by some the Murrain, and by others the Black Leg. It attacks yearlings (between the months of January and July, generally,) in the legs, hips, or shoulder, and is from six to twenty-four hours doing its deed. The parts affected become black or dark colored; the flesh and blood seem to be mixed as though the parts had been severely bruised. I think that one-eighth of our yearlings in this vicinity are lost by this disease. I have seen nothing in the Genesee Farmer, or in any other work which gives much satisfaction on the subject. Perhaps the disease is not a universal one. But if you will give us some information, or enlist the investigations of some of your correspondents, its beneficial results will be gladly received by one, and I trust by many of your patrons. JOHN WATSON.—*East Java, N. Y.*, 1849.

REMARKS.—This disease is known as the black leg, quarter evil, black quarter, and blood striking; and our correspondent describes it correctly. It is an endemic and very local. Its cause is very obscure, and not very rationally accounted for. It is mostly confined to young cattle, with occasional exceptions, and to those confined to low marshes and woodlands. Very high feed, after getting lean in flesh, producing a redundency of blood and a tendency to inflammation, are supposed to be the predisposing causes. A mephitic atmosphere or poisonous plants may also be an accelerating cause. The first symptoms are a dry muzzle, extension of the head, heaving of the flanks, and every symptom of fever, with low moans, and staggering of the limbs. Bleed freely and only on the first symptoms, and physic immediately; if it will not operate, give injections. Feed lightly with scalded bran or shorts. Foment the parts and put in setons. The great object is to reduce the system, and allay fever and inflammation. Cattle poor in flesh and milch cows are said to be almost exempt. It is contagious, and cattle affected should be removed from contact with the healthy.—ED.

THE ART OF HEALTH.—Walking is the best possible exercise. Habituate yourself to walk very far. The Europeans value themselves on having subdued the horse to the use of man; but I doubt whether we have not lost more than we have gained by this animal—for no one thing has caused such degeneracy of the human body. An Indian goes on foot nearly as far in a day as an enfeebled white does on his horse, and will tire the best horses. A little walk of half an hour in the morning, when you first rise, is advisable. It shakes off sleep, and produces other good effects in the animal economy.—*Jefferson's Memoirs.*

AN OHIO CHEESE IN LONDON.—The London papers mention the arrival there of an enormous cheese. The milk of seven hundred cows was used in making it, and it weighs 1474 pounds. It is thirteen feet in circumference, four feet and a quarter in diameter, and eighteen inches in thickness. It was offered for and obtained a prize at the Fair of the American Institute in New York city.

THE best way to get help is to help yourself.

LETTER FROM THE SANDWICH ISLANDS.

HONOLULU HOUSE, Oct. 25, 1848.

D. D. T. MOORE, Esq.—*Dear Sir*: I have regularly received the numbers of your paper since you were kind enough to put my name on your list, more than a year since. Be assured, though the climate and soil of the Sandwich Islands is so different from your latitude, as to render inapplicable many of the valuable suggestions it contains, I find much in it that, by analogy, can be made useful to the horticulturist and agriculturist of this region. As yet, I have not, of course, been enabled to experiment in any of the departments of cultivating the soil, but I hope within a few years to demonstrate that a better climate or a superior soil does not exist than can be found on the Hawaiian group for the tillers of the earth.

As yet but little, comparatively nothing, has been done to develope the resources of these Islands. Most persons who have become residents here are either merchants, seeking their fortunes in commercial operations—missionaries, confined by their obligations to the Board, to other than agricultural pursuits—discharged sailors, who are ignorant and inefficient, except upon the ocean—and now and then an individual of extravagant habits and crude notions of the means necessary to secure efficient labor and render it productive. The latter class have generally been the foreign agriculturists, and their unsuccessful efforts have tended much to discourage others, fitted by their education and habits to make the soil productive. The native population, just emerging from an uncivilized and degraded state, it cannot be expected would, as yet, be able to comprehend or execute the plans of an intelligent farmer. Such being the facts, it is not surprising that the rich resources of our soil and climate are as yet undeveloped. It is to be hoped that the recent discovery of mineral wealth in California will attract a large, intelligent and efficient population from the United States and the Eastern Continent, and that the market that will be thereby afforded for the natural products of this tropical climate, will induce men of capital, experience and proper taste, to emigrate here to supply their wants. I am clearly of the opinion that more money is to be made and more happiness secured by supplying the wants of the gold-hunters, than can, or ever will be realized by them, should their golden dreams all be realized. And I hope and trust the day is not far distant when, as a consequence of the present mania for the gold-dust of California, these Islands shall be rendered the garden of the Pacific.

I am satisfied from the expensive and indifferent experiments that have already been made, that coffee of the best quality, equal to Mocha; sugar unsurpassed in the world; oranges, and all of the tropical fruits, may be abundantly produced, and at a cost that will compete with the Mexican and South American provinces. Specimens of most of these I have seen, and others of more experience assure me there can be no question but they all may be produced at the market price, with profit. But it can not be done without intelligent, industrious and prudent men to manage and direct the labor of the native population.—Could we be blessed with one hundred men, of the experience and ability of the farmers of New York, who would seek their fortunes in agricultural and horticultural pursuits upon these Islands, the day would be near at hand when they would be the West Indies to that portion of the United States west of the Rocky mountains.

As I can say but little concerning the present state of agriculture here, I make these general remarks hoping they may direct attention to the general facts they contain.

The simple wants of the natives, which are so easily supplied, are not calculated to stimulate them to continued and assiduous exertion; but the example of the few foreigners who have located in their midst already has elevated their tastes and increased their desire for the comforts and luxuries of civilized society; and there are many striking examples of thrift and business habits, which warrant the belief that the future progress of this nation is not to be less rapid in the improvement of its business habits, than it has been in intellectual and moral culture. All that is needed now to make the natives emulous in the cultivation of the soil, is the example of foreigners who are ready and willing to secure their comforts and pleasures by the sweat of the brow.

I am satisfied that many of the fruits and products of your climate may be successfully cultivated here. Peaches have already been grown, but as they were seedlings, and proved not to be of the best qualities, I have heard it repeatedly said they were not worth cultivation. You see, therefore, how important it is that the simplest truths in horticultural science should be understood. Patience and successive attempts to grow peaches from stones (as yet the only practicable method here,) I have no doubt would finally result in producing desirable varieties, which might then be propagated by scions and buds. But as the first attempt was not satisfactory, little attention is paid to the subject, and we are without a supply of that delicious fruit. So it has been with many other unsuccessful efforts in horticulture—a single unsuccessful experiment has discouraged a second; and as we are generally without the *Genesee Farmer*, or a similar paper to enlighten the community, as I have before suggested, we are greatly in want of men to give a practical illustration of even the commonly acknowledged truths that make up the science of agriculture.

With very little cultivation, abundant supplies of sweet and Irish potatoes, beans, squashes, tomatoes, and all the other common culinary vegetables, are produced; and was the soil simply sufficiently disturbed, without any of the aids of manure, lime, and the many other auxiliaries that are used in America, I have no doubt the quantity would be doubled. The man who is now planting my garden was astonished that I required him to move or stir the soil beyond the narrow limit of a contracted basin, before I permitted him to plant corn to supply my table—so little is known and practiced of the essential requisites of cultivation. A sub-soil plow or the double spading of a garden, would be considered entirely a waste. The portion of the earth that has been cultivated at all, has generally as yet been only disturbed by a Carolina hoe, or an "Oo," as it is called by the natives, which is a clumsy instrument in the shape of a spear; yet, as I have remarked, it produces a rich reward for the labor bestowed. Could the sub-soil be thrown up and manure and lime supplied, (the latter being very essential, as the entire formation of the Islands is of volcanic origin,) I doubt not the products of what are now comparatively barren districts would equal those of the Genesee bottoms adjacent to the lime ridges, and supplied therefrom with a

solution of lime. Nature has done all that the most covetous could require, and I hope and trust that man will soon enjoy the rich bounties that are in store to reward his labor.

Gorgeous and beautiful are many of the flowers of our indigenous plants and shrubs, and I should be glad to have some of them cultivated in the hot-houses of Rochester. If you think any of your Floriculturists would pay the cost of sending them by express from Boston or New York, I will send you seeds of some of the most desirable. They very far surpass the natural products of a colder climate.

If this general and hastily written scroll will interest others it is at your service, and I hope at some future day to send you an article better suited for an agricultural paper. Yours, &c.,

A. B. Bates.

FARMER'S LABORATORY.

The discoveries and improvements of late have added "Modern Agriculture" to the list of the sciences, and erected it into one of the highest dignity. The intelligent and skilful agriculturist possesses, in his farm, a splendid laboratory, furnished with a thousand chemical agents, by the action of which all the results of culture are obtained; and the ancient alchymists are now realized by every scientific farmer; for they have truly discovered the philosopher's stone and derived the true means of converting into gold, the very elements of the earth. By the aid of Geology, Mineralogy, Chemistry, Botany and *Labor*, he has forced the earth, the rocks, minerals, acids and alkalies, to yield their stubborn properties, singly or in combination, in relief of the first wants of mankind. The discoveries of the nature and properties of the constituents of the soils, has taught him the art of adapting the proper growth to their peculiarities, rendering the same land, by the same labor, doubly productive, and the means of resuscitating exhausted lands, making them fertile as virgin soil. The improvement in the construction of implements of husbandry, the invention of a thousand new modes of saving labor, by ingenious machinery, and the wonderful facilities of transportation, have materially lessened the toils and risks of the farmer, and contributed essentially to the success of his pursuits.—*Bement's Jour. of Ag. and Science.*

Milking Cows.—In your last year's volume, page 55, you have given us ten rules from the "Maine Farmer," to be observed in milking a cow—all of which I highly approve of, excepting one, which is, wetting the cows teat with the first stream of milk. That practice I have strong objections to—first, because it is what our New York dairy women call a *nasty* trick. If you watch such milkers, you will often see them use so much milk that it will drop from the hand into the pail, carrying with it the filth of both the hand and the teat, which forms a composition that many would not relish. Second, the teat being left wet in the cool air is liable to crack. Third, it is an unnecessary practice. A cow can be milked equally as quick, and with the same ease, with a dry teat as with a wet one. Try it. Reed Burritt.—*Burdett, N. Y.*, 1849.

The consciousness that, in a particular matter, we are doing right, often constitutes more real enjoyment than triumph itself.

CULTURE OF INDIAN CORN—A PREMIUM CROP.

BY JOHN SHELDON.

Messrs. Editors:—The following statement of two acres of corn cultivated by me in the town of Leicester, in 1847, was presented to the Livingston Co. Agricultural Society. The Society awarded its first and second premiums, offered for the best and second best acre of corn raised in the county the year mentioned.

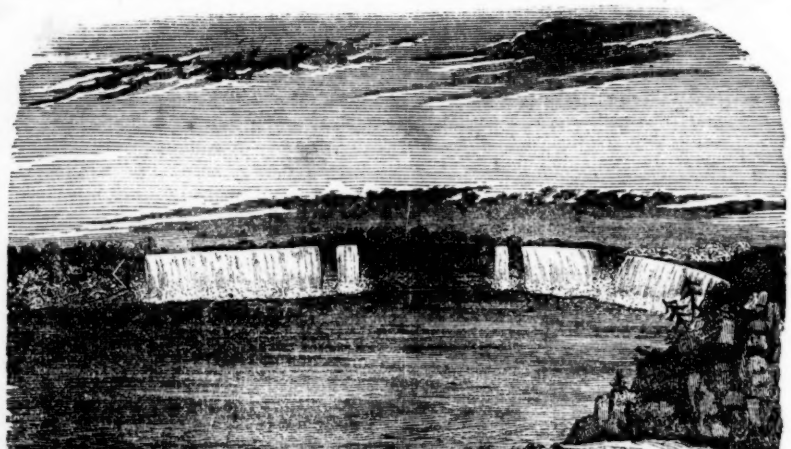
The two acres were selected, separate from each other, from a field of about 5½ acres. The soil alluvial, near the Genesee River—heavily manured 6 or 7 years previous to this crop, but none since. Corn had been grown on the same field for 8 years in succession, previous to this crop—in 1846 about 50 bushels per acre. I commenced plowing it on the 10th of May, and plowed from 9 to 10 inches deep. Harrowed and marked it ready for planting on the 14th—finished planting on the 17th—rows 3 feet apart each way—from 4 to 6 kernels in a hill, and covered about an inch deep. The seed was soaked about 12 hours in salt petre, (immediately before planting,) and rolled in tar and plaster, taking care not to let the sun dry the seed. On the 7th and 8th days of June, I hoed the corn the first time—first passing once each way with a cultivator. On the 28th and 29th of same month, passed through each way with a shovel plow, and hoed second time. Hilled the corn considerable, and thinned it to four stalks in a hill. At husking time, agreeable to my request Col. Hosford, one of the Executive Committee, viewed the corn standing in the field and measured the ground.

Now for the result. I husked and measured from the first acre 220¾ baskets or bushels of ears—and from the second acre, 200 baskets. Two bushels of ears, measured in the above manner, made one bushel and 3 pints of shelled corn—and assuming that every two bushels of ears would yield the same quantity, the produce of the two acres, in shelled corn, was as follows: From the first acre 115½ bushels, and from the second 104 bushels and 22 quarts. The corn was all measured with care by myself, in a basket which held a trifle over a bushel when even full, at which height I measured, thinking I could be more accurate than by heaping it. It was measured in a sealed half bushel, by which the basket was also measured.

The variety of corn grown was the 8 rowed white flint. The expense of cultivating the first acre was as follows: Plowing, harrowing and marking, $2—planting and hoeing twice, $3—cultivating and plowing, $1—seed 25 cents—husking (115½ bushels at every 10th, 11½ bushels at 50 cents per bushel,) $5.75—making in all $12. Deduct this from crop (115½ bushels, at 50 cents,) $57.75 and stalks $6, and it leaves net profit $51.75. Second acre, corn $52.33—stalks $5 50; expense of cultivating as above, except husking, $11.48—leaving a net profit of $46.35.

This crop received the most thorough cultivation in every respect. I was particularly careful at each hoeing to stir every part of the surface thoroughly, and to do the plowing so as to turn it *topsy turvey* and pulverize the soil completely in the process. In short I aimed to have every part of it done in a farmer like manner, as it ought to be, and I was well rewarded therefor—which I believe to be the almost invariable result from thorough cultivation.

Moscow, Livingston Co., N. Y., 1849.



VIEW OF NIAGARA FALLS.

Agricultural Geology.

NIAGARA FALLS—ITS PAST, PRESENT AND PROSPECTIVE CONDITION.

BY DR. E. EMMONS.

Among the phenomena of waterfalls and river gorges the Cataract of Niagara is justly regarded as holding the first rank, and as standing an index in the path of time, by which the influence of numberless ages upon the surface of our planet may be recorded. Its present, its former and its prospective conditions have engaged the investigation and speculation of many philosophers. The possible consequence of its entire reduction, and the drainage of the upper lakes, have excited the wonder and apprehensions of many. The estimated time of its recession has sprinkled gray hairs among the fresh locks of the young and blooming earth, and alarmed those who would consider her still youthful in years.

But amid all these speculations, Niagara still remains; the thunder of its cataract still reverberates through its deep chasms, and its ocean of waters still rolls on as, unknown to the white man, it rolled a thousand years ago. When we come to the investigation of facts, we find that, except to travelers and the aborigines, Niagara was unknown until within the last fifty years; and that even during this time no accurate observations have been made, no monument erected to determine whether the falls are retrograding or not. The testimony of living witnesses and historical evidence unite in confirming the opinion that the water is wearing away the rock, and that the outline of the falls has changed. From these general observations, it has been estimated that they have receded at the rate of about forty feet in fifty years. Without pretending to question the accuracy of this or any other estimate of the kind, or to establish any rate of retrogression in the falls, we may examine its present, and from numerous facts infer its past condition, and from these we are entitled to draw an inference for the future, though without specifying time.

Both in relation to the former condition and to the future recession of the falls, we may regard the problem as undecided with respect to time. So many disturbing causes are constantly presenting themselves, that, although the great principles may be regarded as established, still it is impossible to calculate accurately the effect of these minor influences. The recession of every mile changes the whole aspect: new elements are brought into operation; the nature of the strata varies; the relative height of certain portions, and the elevation of the whole cascade is altered; and we have had time to observe only one of the phases, and to reason from that to the future, before the condition is changed, and we must take into the account new influences, which the previous changes have called into operation.

The great difference in elevation between Lake Ontario and Lake Erie, and the occurrence of the Cataract of Niagara, form one of the most striking features in the topography of Western New York. The difference in elevation of the upper great lakes is comparatively small, they being nearly in the range of the strike of the strata, while the passage from Lake Erie to Lake Ontario is directly across the line of dip.* Lake Erie is 334 feet above Lake Ontario, and the greater part of the descent from one to the other is overcome by the rapids and falls of the Niagara river in the space of one mile.

Niagara Limestone.—Asilico argillaceous limestone forms the bed of passage from the soft shale below, to the purer limestone above. When freshly exposed it is often of a dark or bluish color, but soon changes to light gray or ashen; and though variable in character, it is a constant accompaniment of the group as far as observed. It forms a good hydraulic cement, where it has been used for that purpose.

*The geological positions of Lake Superior and Lake Ontario, the highest and the lowest of this chain of lakes, correspond very nearly with each other.

In the eastern part of the district, these beds of passage are succeeded by a dark bluish gray, subcrystalline limestone, of a rough fracture, and separated into thin courses by dark shaly matter. When not too much divided by seams, it forms a durable building material. This again is succeeded by a coarse-grained concretionary mass in irregular layers, exhibiting an appearance as if much disturbed while in a semi-fluid or yielding condition. The concretions often present cavities lined with crystals, or the remains of some fossil body. The upper strata are finer grained, with a resinous lustre; and on weathering the surface is harsh and sandy to the touch; this, however, seems due to the presence of magnesia rather than silex.

Agricultural Characters.—The two members of this group are marked, to a considerable degree, by a difference in the soil. The destruction of the shale has given rise to a clay, which mingling with the more sandy productions of the Medina sandstone on the north, has produced a soil of unequalled fertility; and there is rarely, if ever, to be found a better wheat-growing soil, than the portion overlying this rock. In some places it has a greater amount of argillaceous matter than is desirable, and forms a stiff soil; but where the slope of the surface is sufficient for effectual drainage, it produces no inconvenience.

The soil covering the limestone, particularly where it is a little elevated above the country on the north, is of a loamy character, the argillaceous nature of the mass below having had little influence. In many places however, for a small extent, the surface is clayey, and even extremely so, as if the materials of the lower rock had been deposited upon the higher. An example of this kind occurs a little west of the village of Lockport, where the limestone is covered by a clayey soil, while a mile or two further east, the soil is a light loam. The latter character also prevails in some places near Rochester, and at other points along the outcrop of this limestone. This character of the soil, together with the rapid drainage to which it is subjected, from the fissures or joints in the limestone, as well as the proximity of the rock to the surface, has given rise to a different growth of timber, which every where marks the limestone terrace. While the country on the north and south sustains a forest of maple, beech, elm, ash, and the associated forest trees; that along this limestone is indicated by oak, chestnut, and others of the same nature.—*Natural History of New York.*

THE POTATO DISEASE.

BY R. H. HOYT, M. D.

Messrs. Editors:—I have been solicited, for the past four years to give my views and observations in regard to the causes, &c., of potato rot. It is now nearly twenty years since I first discovered a worm in the potato vine, and which I little thought of then, but which, from mature observation and research, I have no doubt is the cause of the potato rot. I observed, at that time, only an occasional worm, and probably every farmer of experience and observation can recollect for the last twenty years occasionally finding a rotten potato in his fields while digging. There has been notice given of this worm within the last two years by two individuals, but no particular description of it.

I have confined my observations, particularly for the last seven years, to the ravages of this worm; of which, if it were necessary I could obtain abundant evidence. Like the caterpillar tribe it is first generated from an egg, which forms a chrysalis state, lies dormant in that state through the winter, and changes (from the vivifying influence of the sun) to a small white miller, that resembles in every respect that which infests the apple and other fruit trees; although a perfectly distinct species. The miller deposits an egg or eggs, the last of May, or beginning of June, either on the vine, or on the ground near it—mostly I think on the vine—which hatches in from one to three days, depending on the weather. This produces the small worm, probably, described by Mr. Bartholomew, although I have not discovered it pointed at either end. While in the larva state it is from five to eight lines in length, but attains that of an inch or more. The back is a light brown color, the head darker, belly white, with six legs, three on each side, near the head. I have killed many thousands of them, by cutting off the vine close to the surface of the ground, slitting it open lengthwise, and have universally found this description of worm, and very active, squirming and throwing itself into various attitudes, but never attempting to crawl off. It perforates a hole in the vine from the surface of the ground up to one-half or two-thirds of the top, and I have never seen the hole bigger than a common darning needle. It works its way up and down the vine, making it a complete hollow tube. The situation it remains in during the winter I am unable to say, never having been able to detect it in any condition. I have found it often in weeds growing among potatoes, and in corn stalks planted by the side of them. When it infests the corn stalk it commences at the top before tasseling, and works its way downward, in a measure destroying the stalk. (I would here say that I am greatly indebted to Mr. Thomas Anderson, of Painted Post, Steuben Co., N. Y., for his assistance in discovering this insect in the winged state, and in the deposition of its eggs.) After entering the vine it works its way up and down, eating all the soft spongy part of it down to the very bottom, to the commencement of the first root, not molesting that or the small branches.

And now having given all that I have been able to learn of its ravages upon the vine, its different states, &c., I would say a few words upon the decomposition or rot of the potato. I have examined hundreds of hills in the last six years, and have universally found that, where there was a hollow vine, there was a rotten potato at the termination of it—the small branches of roots having, as universally, sound potatoes. *East Townsend, Huron Co., Ohio,* 1849.

We are compelled to omit some experiments and speculations embraced in the above article. In fact the subject has become so hackneyed, that we have declined publishing the thousand theories and histories of this disease; but Dr. Hoyt is so certain of his discoveries that we relented, although entirely contrary to our views and examinations. In short, it is a subject as inscrutable as the cause of the cholera, and whether it is tuberic, atmospheric or parasitic, is far from settled; and the only preventive to be relied on, is to plant early, on dry high ground, that is not rich, or been recently manured.—Ed.

Don't give the boys the poorest tools, and then complain because they can't keep up with men in planting, hoeing, &c.

Meteorological Observations, &c.

METEOROLOGY---CLIMATOLOGY.

BY L. WETHERELL.

Some account of the variations of temperature upon the surface of the earth, with a statement of some of the causes that produce them.

That department of meteorology denominated climatology, is of great interest to man in every relation of his earthly existence. But none feels a more direct interest in this subject than he whose labors are nothing worth unless aided by the seasonable distribution of light, heat and moisture.

The sun is the source of both light and heat, without whose rays vegetable and animal life would soon cease from this planet. It is a well known fact that these are not equally distributed over the surface of the earth. This is owing to the following causes, viz: the annual motion of the earth round the sun, the diurnal rotation upon its own axis, the inclination of its poles; also, the effect of geographical position, configuration and altitude. In consequence of the earth's annual motion the position of the sun in the heavens apparently changes. The path of the sun thus described is called the *elliptic;* intersecting the celestial equator at an angle of 23° 28′, on the 21st of March and September of every year. On each of these days, at noon, the sun's rays fall perpendicularly upon the earth's surface at every place upon the terrestrial equator, and falling very obliquely at the poles.

Two imaginary circles are drawn parallel to the equator, each 23° 28′ from it; the one north is called *the Tropic of Cancer,* and the one south *the Tropic of Capricorn.* Over that part of the earth's surface embraced between the tropics the heat is distributed with something like equality; that is to say, unless varied by altitude.

Geographers have divided the earth into five zones or belts—the first, or torrid zone, is 3,243 miles in breadth, containing 77,700,000 square miles; second, the two temperate, each about 2,970 miles in breadth, each containing 50,000,000 square miles; and, third, the two frigid, each 1,663 miles wide, embracing each 8,000,000 square miles. Instead of this division the ancients used the word climate to signify that obliquity of the sphere with respect to the horizon from which results the inequality of day and night. The day and night are of equal length on the equator—soon varying as the poles are approached either north or south.

The following table, copied from "Muller's Meteorology," will give a very good view of this use of the word climate; also showing the length of the day in different latitudes:—

Polar elevation.	Length of the longest day.
0	12 hours.
16 deg. 44 min.	13 "
30 " 48 "	14 "
49 " 22 "	16 "
63 " 22 "	20 "
66 " 32 "	24 "
73 " 39 "	3 months.
90 "	6 "

Some of the ancients, instead of nine divisions, made twenty-four between the equator and the polar circles, and six between the polar circles and the poles—the former called half-hour climates; because, from one to the other the length of the day is increased half an hour; the latter called month climates, because between any two of the lines, as the pole is approached, there is a difference of a month in time.

The annual mean temperature of a belt 1,390 miles wide, embracing 10° each side of the equator, and on a level with the sea-coast, is said to be about 82°—varying, however, whether an eastern or western coast, always higher on the western. The sun being twice vertical in the year to every place lying in the hot zone, every place situated within this belt has two summers and two winters every twelvemonth. The difference of temperature is so trifling as scarcely to attract attention. At Cumana, in South America, situated at 10° north latitude, the mean temperature of the winter is 80¼°; and that of the three hotter months is only 83½°. The mean temperature of Havana, on the island of Cuba, situated 23° n. lat., is 78°; that of Madras, in lat. 13°, is 81°; that of Manilla, the principal of the Philippine islands, in latitude 15°, is the same as Havana. The temperature here is remarkable for its equaminity.

The annual mean temperature of Massowa (Abyssinia, 15½° s. lat.) 87-6°; of Mexico, (19½ n. lat.) 62°; of Lisbon, (38½° n. l.) 61.4°; of Madrid, (40½ n. l.) 57-4°; Baltimore, (39° n. l.) 53°; of Paris, (49° n. l.) 51.3°; London, (51½° n. l.) 50.9°; Vienna, (48 n. l.) 50.1°; of Geneva, (46° n. l.) 49.3°; of Berlin, Edinburgh, Hamburgh, and Tubingen, (the first 52½°, the second 53½°, and the third 56°, and the fourth, 48½ n. l.) each 47.6°; of Rochester, (43° n. l.) about 48°; of Petersburgh, (60° n. l.) 38.2°; of North Cape, (71° n. l.) 32.1°; and of Melville Island, (75° n. l.) 1.75 below zero. The mean temperature of the winter of the last place mentioned, is 28.2 below zero; of the spring 3.1 below; of the summer 37.1 above; and the autumn 0.4 below zero; the coldest month, February, 35.8 below zero.

As will be well recollected by those who read the article on the "Distribution of Plants," in the last number of the Farmer, it is found to be much colder on the eastern coast of either continent than on the western; that is when the annual temperature of places on the eastern coast of America is compared with those of the western coast of Europe, a remarkable difference is seen. Nain, on the coast of Labrador, 57° n. lat., has an average temperature of 26.5°; Christiana, in Norway, 60° n. lat., average temperature 42.7°.

The average temperature of Quebec is 42°, while that of Amsterdam, 5½° further north, has an average temperature of 52°. Halifax lies in the same latitude with Bordeaux, New York with Naples. The average temperature of Halifax is 13° lower than Bordeaux; and that of New York 7° lower than Naples. As the equator is approached these differences gradually diminish, as seen by comparing St. Augustine and Cairo; each, situated 30° n. lat., has almost the same degree of temperature.

New Archangel, on the west coast of America, has nearly the same lat. as Nain on the opposite coast; yet its average temperature is 19 deg. above that of Nain. Pekin is further south than Naples; yet the former being situated on the eastern coast of Asia, has an average temperature of 9 deg. lower than that of the latter. In the northeast of Ireland, lat. 55°, the average temperature of the winter is about 8 deg. above freezing point: here the myrtle thrives as well as in Portugal. On the coast of Devonshire the

Camelia Japonica and the *Fuschia Coccinea* winter in the open air.

But it is time to notice the causes of this unequal distribution of heat over the same latitude and altitude of the earth's surface. These are here presented as condensed from Muller's work, already quoted from. Muller says that, "In the northern temperate zone, southwest and northeast winds prevail, the former from the equatorial regions, bearing with it the genial influences already noticed. The second cause, to which Europe owes its relatively warm climate, is, that in the equatorial region, it is bounded on the south by Africa, whose vast extent of desert and sand render it extremely hot, exposed as they are to the vertical rays of the sun. A heated current of this air is continually rising from these glowing hot sandy wastes, and is borne over Europe, where it mingles with the air and greatly elevates its temperature.—Finally; the *Gulf Stream* contributes greatly toward rendering the European temperature milder than that of other countries of the same latitude and altitude. This stream or current has its origin in the Gulf of Mexico, where the temperature of the water is 87 deg. This heated water is borne off toward the coast of Europe, and in lat. between 45° and 50° the temperature in January varies from 51 deg. to 48. And there are two other important causes to be mentioned, viz.: there are no mountains to interrupt these currents of warm air on the southwest and west; and secondly, Europe does not extend so far north as either America or Asia—and it is also protected by northern seas which greatly modify the cold from the north."

Thus are presented a few of the great facts which go to make up the science of Climatology.

Rochester, April, 1849.

Spirit of the Agricultural Press.

Washing Sheep.—A correspondent of the Prairie Farmer says he washed his sheep last spring in the following manner—as recommended by an experienced wool dealer:—

I took a trough that would hold about a barrel, and filled it with soap suds. I laid a board on one edge of the trough, slanting towards the trough, so that when a sheep was dipped and taken on to the board the water would drain into the trough. A boy took the hind legs of the sheep, and I took the fore legs, and turned their back into the trough; then raised them out on the board and squeezed the wool thoroughly with our hands. When the soap suds grew low we would add more—having a quantity of dissolved soap in readiness. The suds should be made very strong.

When we had thus soaked them all, we commenced washing. I found the wool whiter and cleaner than I ever got it before without soap, though I have helped to wash sheep more than twenty years. And when we came to shear the sheep, we found the ticks all dead. Not more than four live ticks were found on any one sheep.

Fence Posts.—A practical farmer informs the Hartford Times, that in taking up a fence that had been set fourteen years, he noticed that some of the posts remained nearly sound, while others were rotted off at the bottom. On looking for the cause, he found that those posts that were set limb part down, or inverted from the way they grew, were sound. Those that were set as they grew were rotted off. This fact is worthy the attention of the farmers.

Scare Crows.—We have for several years used sheets of bright tin, tied to slanting poles ten or twelve feet in length. Six or eight sheets are sufficient for an acre, and they have proved to be the cheapest and best scare-crows we have used. The motion given the sheets by the wind, causes a brilliant reflection of light at every turn, when the sun shines, and no crow has ever troubled our corn fields while the tins remained suspended upon the poles.—*Boston Cultivator.*

Chinese Hemp.—French agriculture has recently been enriched by a very important new production. This precious article is the Chinese hemp, the seeds of which were imported into France by M. Stier, a member of the French embassy in China and has been cultivated and naturalized at Marseilles by M. Garnier Savatier. This hemp, the reproduction of which is now secured by the seeds which have ripened in the best possible manner, grows to a height of twenty-four or twenty-five feet, the stalk is from 5 to 6 inches in circumference, each plant produces from two to three kilograms of seed, and furnishes thread enough to make a yard of superb lawn, superior in beauty and quality to any obtained from French materials. The cultivation of the plant in the south of France will be the more precious to the country as a climate of the temperature of that region is necessary for its fructification, and its seeds will find a ready sale in other countries where the seeds will not ripen, but where the filaments may be produced. The South will thus have a double advantage. Some specimens of this plant were exhibited at the Agricultural Show at Montpelier. The height of it was from twenty to twenty-five feet.

Grafting Chisel.—The above is probably the best form for a Grafting Chisel. The wide edge is used for splitting the stock, after being cut off with a fine pruning saw. The two pointed ends are used to open the same to receive the scions.

Marking Sheep.—An agriculturist says, I wish to impress it upon every one who keeps a flock, if not more than half a dozen, that Venetian red is the best thing that I ever saw used to paint-mark sheep. It is, as most all know, a cheap red paint, only a few cents a pound, and one pound will mark a thousand. Take a pinch of dry powder, and draw the thumb and finger through the wool upon the particular spot you would mark, loosing the powder at the same time, and it will combine with the oil of the wool, and make a bright red mark that rains will never wash out, and which will endure from one shearing to another, but does not injure the wool. It is readily cleansed out by the manufacturer.

The Striped Bug.—We find in the Vermont Agriculturist the following, recommended as a sovereign remedy for that pest of the melon vines—the striped bug. "Take half a peck of manure from the hen-roost, put it in an old tub or box, and add four gallons of water. In twenty-four hours, by stirring it two or three times, it will be ready for use.—Put half a pint of this liquid upon a hill of melons or squashes, and the *striped bugs* will certainly vanish. At least we have found it so on repeated trials, for several successive seasons. The bugs may not every one vanish on the first trial; and they may re-appear; but we have never had a vine injured after this application. Besides protecting the vines, this liquid is the very best of manure, and the application may be frequently repeated, wetting the leaves if a stray bug or two should linger on them, without apprehending any harm.—The manure tub will bear to be filled up several times with fresh water. The only objection to this plan is made by the olfactory nerves."

New Invention in Baking.—The Glasgow Citizen (Scotch Paper,) says that a machine has been invented in that city which both kneads the dough and moulds the loaves into the required shape, ready for the oven. One machine not quite a yard in length and 18 inches in breadth, by the attendance of one man accomplished as much work as five bakers, and the bread was of the best quality. The Citizen also says, that "by a new and original process of mixing and kneading, which can be done either with or without barm (yeast) the usual loss of weight attributed to evaporation in 'rising the sponge' is avoided, and a great saving of flour, as well as time and labor is effected."

Clover Seed Sown with Buckwheat.—On a late visit to Hydepark, we were shown several fields of heavy clover on the farm of J. W. Wheeler, Esq., which was sown last season, with buckwheat and timothy. The soil is a gravelly loam, and the grass exhibits a burthen superior to that generally sown in the spring. This, we believe, is the practice of Judge Van Bergen, of Coxsackie, who is one of our most successful farmers.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

THERE is no other branch of horticultural practice more discussed, and withal, less understood, than the simple matter of TREE PLANTING. To plant a tree properly means more than to dig a hole and put the roots into it, and cover them with earth: yet more than half, we might say three-fourths, of those who do plant, consider this the *only* necessary process, and wonder when they have done it that their trees do not grow well. Every planter should remember that few trees are in the proper state to plant as they are taken from the nursery. The nurserymen desire to have their trees well clothed with branches; and if replanted with all these branches left entire, a tree will either die the first season or make a very feeble effort at living. Grow it cannot, for the roots that would have fed and sustained all these branches have been mutilated and disabled from performing their usual functions until they have emitted new roots.

Now some trees form roots much quicker than others—and some soils and seasons are much more favorable for the development of roots than others—so that certain kinds of trees, and in certain soils, a transplanted tree will bear a large head and numerous side branches, and yet live and grow, while other trees in other soils will remain a year before any considerable number of new roots have been formed. Among fruit trees, the *apple*, the *quince* and the *peach* emit roots much more freely than the *pear*, *plum* and *cherry*—and in light, sandy, friable soils form much more easily than in stiff, moist, adhesive soils These are familiar facts to all cultivators, and they serve as a guide in planting.

But under all circumstances it is unsafe to plant a tree without reducing its branches in such a manner as to compensate for the loss of root, and general derangement inseparable from removal. Let us take, for instance, an apple tree, six feet high, with a fine head and numerous side branchess. This tree was growing vigorously in the nursery, with its roots spread out and well at home in the soil; but the tree is dug and pulled up, part of its large roots are *cut* off, many of the smaller ones are dragged off, and before it is planted a great many more are dried or rotted and killed off. Thus the tree is left minus a great portion of its feeding roots, on which the top must depend for support. Its nice balance, which nature and art gave it in the nursery rows, is destroyed, and without some compensation it cannot live—at least it cannot grow for a long time to come. The opening buds seek for nourishment, but after the little stock laid up previously is exhausted, they can find none, and perish they must.

How often have we heard people say, "my trees leaved out nicely, but died away immediately after;" and this was owing to a defect in the roots—they could not meet the demands of the mass of buds struggling to grow. The cause might be in a large head, small or poor roots, an unfavorable soil, or in all combined. Now how are planters to guard against these difficulties? Simply by the exercise of a little judgment in the matter. If a tree has attained considerable size, and has a branching head, these branches should be cut back according to circumstances. A tree with large and healthy roots, and abundance of fibres, will sustain a much greater amount of head than a tree with short, poor or badly mutilated roots, and few fibres. Apples, Quinces or Peaches will bear more head than pears or plums, and so on. Trees taken fresh from the soil and replanted do not require the same degree of cutting as those that have been transported to a great distance. Trees that are planted in a light, mellow, warm soil, favorable to the formation of roots, will require less cutting than those planted in a colder, stiffer soil, where roots will be emitted slowly. Trees taken up with the earth around the roots, and evergreens, are the only exceptions. These are a few of the circumstances to be well considered by every one who plants a tree.

Pruning and cutting back, must not only be done, but done well. It is next to manslaughter to cut and slash the branches of a tree with an old rusty saw-edged jack-knife. It is nothing else than tree-slaughter, and there are thousands that ought to be convicted of it this moment, and sentenced to seven years pilgrimage on a treeless prairie, for their cruelty and carelessness. It would fare ill with them were they brought before a court and we were judge. A pruning knife should be as sharp and smooth on the edge as a razor. When a branch is to be wholly removed it should be done smoothly, close to the trunk or limb on which it grows. If a limb is merely to be shortened, it should be cut close to a good plump and healthy looking bud, that promises to make a vigorous shoot. If the future shoot is desired to grow erect, the bud should of course be on the upper side of the branch cut; and if desired to take a spreading or horizontal direction the bud should be on the under side. The object in cutting close to the bud, (not so close as to injure it,) is to avoid the piece of dead wood that must remain, if cut between two buds. Then the balance of the tree must be thought of. If the branches are left longer on one side than on the other, the tree will inevitably grow one-sided; the shoots on one side will be more vigorous than on the other, and this will be another disaster. This is as plain as we can at present make the matter in a few words. To sum it up, in short, we would say—

1st—Place the roots of your trees in a soil *favorable to the formation of roots.*

2d—*Reduce the heads* in a manner to correspond with the character of the tree, the condition it is in, and the season and situation in which it is planted.

3d—In every operation exercise *reason* and *care*, for it is astonishing what even the unpracticed hand can do, if he will but *think*.

These remarks would perhaps have been more valuable last month, but even now they are not too late for many to profit by them. A great many spring and even last autumn planted trees, may be saved and benefitted by a careful shortening and thinning of their branches. Had it not been for the absence of our engraver, we should have illustrated these suggestions with cuts that would have rendered them more servicable.

SOW PEAS.—"Bishop's Early Dwarf," "Early Prince Albert," and "Landreth's Extra Early," are all good kinds for early sowing. The "Blue Imperial," and the large "White Marrowfat" are good kinds, but later.

HINTS FOR MAY.

Transplanting of all deciduous trees will have been completed. Evergreens may be transplanted nearly all the month. Large trees cannot be moved with safety, unless with large balls of earth attached. Plants from one to two feet are always safe. Among our native trees the *White Pine, Hemlock, Red* and *White Cedar, Balsam Fir* and *Juniper*, are all worthy of attention and easily procured. Among foreign trees the *Norway Spruce, Silver Fir, Chinese* and *Siberian Arborvitæ, Scotch* and *Austrian Pine* are among the most common and are all fine trees, and are now sold cheap in the nurseries.

The new and rare Evergreens are generally kept in pots for safe removal, and may be planted out any time. The principal of these, now to be had at the nurseries, are the *Deodar Cedar*, the *Auracaria* or *Brazil Pine*, the *Cedar of Lebanon, Himalayan Spruce*, and *Pinus Excelsa*. These are all elegant trees for lawns.

Hedges of *Norway Spruce, Red Cedar, Hemlock, Arborvitæ*, &c., may be made all the month. Small plants, one or two feet high, are the best for this purpose.

Hardy Annual Flower Seeds may now be sown where wanted to bloom—and those raised in frames planted out on a dark day.

Border Plants of all sorts wintered in the house or in frames, may be planted out in masses. The principal of these are the *Everblooming Roses, Scarlet Geraniums, Verbenas, Petunias, Salvias, Heliotropes*, &c., &c. *Phloxes* of the more dwarf varieties make elegant plants for masses, and as a stock of them are always kept in pots, may be planted out any time. *Dahlias* should be planted about the latter end of the month. Strong young plants raised from slips this season will give a better bloom than old roots.

VEGETATION IN MISSISSIPPI.

Dear Sir :—I have this day (March 7) measured the growth of some trees here, so as to be certain in my figures. I measured a *peach tree*, budded Sept. 18, 1846, removed from my nursery 6 days ago—it measures 9 inches in circumference within 6 inches of the earth, and retains this size for over two feet. *Apple*, grafted in Feb., 1848, over 2 inches. *A cutting of a seedling pear*, put out Feb., 1848, is now 2 inches in circumference. *Quince cutting*, put out Jan., 1848, over 2 inches. *Pawlonia Imperialis*—a cutting of a root not larger or longer than a pencil case was put out Feb., 1848—it is to-day 7 inches in circumference, and I suppose it to be over 10 feet, as I had no pole convenient. *Asparagus* 26 inches high to-day—not strong enough yet for cutting.—*Red bud* in bloom. *Dog-wood* in bloom. *Double Flowering Apple* in full bloom on the 5th.

I saw an apple tree bloom to-day. Several varieties of pear in bloom. Forest trees have quite the appearance of spring—in a few days the trees will be green, as red oak and post oak buds are nearly bursting. The bark of the forward seedling peaches and of quinces will now admit of budding; and by way of trying, I budded a peach on Monday, the 5th, and a plum to-day.

These items may prove pleasing to you, and if you deem them to be worthy of record, hand them to Genesee Farmer. [We are much obliged for them. —Ed.] With respect, &c., yours, M. W. Philips.

Washington, Miss., March 7, 1849.

SUMMER BON CHRETIEN PEAR.

Friend Farmer :—The object of this communication is to do justice to an old and honored friend, the *Summer Bon Chretein Pear*, and say, come up hither, for thou art worthy of a higher seat. That different varieties of pears are not adapted to the same location, I believe to be an orthodox doctrine; and however poorly the stock may do elsewhere, or however much it may lack flavor, or however undeserving it is of a place in a small garden,* it certainly ranks high in this section of country. The tree is one of the most healthy and vigorous that we have. It seems to be at home on the quince, apple or pear. It is also a good bearer, and instead of the fruit's lacking flavor, it is one of the highest flavored varieties grown in this part of the State. A neighbor of mine who has the *Onondaga* or *Swan's Orange, White Doyenne, Gansel's Bergamot*, and *Dearborn's Seedling*, in bearing, together with the *Summer Bon Chretien*, told me a few days since that he thought the latter decidedly the best pear he had ever ate. David Thomas, too well known to the fruit culturists to need an introduction, once told me that he considered the Summer Bon Chretien the best eating pear he had. The Fruit Culturist, by J. J. Thomas, if my memory serves me correctly, does it very good justice. My friend Thorp, of the firm of Thorp, Smith & Hanchet, of the Syracuse Nursery, told me that he had seen them on the Hudson and thought that Downing's description of them was correct for that section, but that it would not apply here. I think then that it is but fair to conclude that although it may prove indifferent on the Hudson or in more southern and eastern longitudes or latitudes, yet for this country or even farther North, for I am told that it prospers in the vicinity of Montreal, it should not be given up. But in both the garden and orchard, it should have a place among the first class of pears. Cephus.

Hinmanville, Oswego Co., April, 1849.

We find this old pear in our markets every year in abundance, indeed much more plentiful than any other; and while we admit that it may be called *good*, we must say that it is, to our taste, inferior *greatly* to Bartlett or Seckel. We think with Cephus that it succeeds much better here than in the East.—Ed.

*Downing's Fruit and Fruit Trees of America.

The Season.—The spring so far has been exceedingly cold. About the middle of April, after a week of mild, growing weather, we had three days of extreme cold. The ground was frozen two to three inches deep, and all out door work suspended. In some places the fruit crop, particularly peaches is said to be injured; but, as far as we have seen, the prospect here is fair. Neither the unusual severity of the winter, (as low as 10° below zero,) nor this untimely April frost, has materially injured the crop in this vicinity. In the South the peach crop will probably be an entire failure.

To Preserve Flowers.—Ladies who wish to preserve flowers are recommended to try nitrate of soda. As much as can be held between the thumb and finger placed in the water with flowers, will preserve their freshness and beauty, it is said, for a fortnight.

PAXTON'S MAGAZINE OF BOTANY.

This famous English Journal closed its fifteenth year on the 1st of January last. It has been, during the whole of its existence, devoted almost exclusively to notices of new flowers and flowering plants worthy of cultivation, and has rendered important service in this department.

Both its character and title are now changed. The introductory address says: "The present state of society, however, requires us, in commencing our labors for 1849, to enter upon a far more extended field of action. Floricultural subjects, however lovely or enchanting, are not the only ones which must henceforth occupy the attention of those who would keep pace with the progress of gardening pursuits; for although an almost undivided attention has been paid by many practical men, for years past, to ornamental plants, it has only been with the design of placing Botany and Floriculture in the same position as that occupied by the other and perhaps more useful portion of the vegetable creation. This end being attained, we feel that we can now usefully direct our attention to vegetable nature in all its vast variety, and cultivation in all its different forms, both of fruits, vegetables and flowers." The new work is, therefore, to be called "THE MAGAZINE OF GARDENING AND BOTANY," and will "include articles from the first pens on Botany, Floriculture, Horticulture, Arboriculture, Landscape Gardening, Natural Science, Rural affairs, and every other subject connected directly or indirectly with the vegetable creation." We have no doubt but this Magazine will in future be the best of its class in England, or perhaps in the whole of Europe. We do not suppose that many of our readers know anything of it, or feel any interest in it; our only object in noticing this change and its cause is, that something of the condition and progress of English Horticulture may be learned from it.

THE PLUM.

Our correspondent J. H. W., of New Haven, N. Y., sends us the following acoount of his experiments in plum culture:

"This article shall be devoted to the Plum tree. Perhaps my best course would be to give the history of one particular tree—a blue damson—the only one I succeeded in saving out of quite a number planted at the same time; the black gum destroying all the others, in despite of all I could do with the pruning knife. This was attacked in the same way, but being younger, I destroyed the knots as fast as they appeared. The tree stands on a heavy clay loam* I made the ground quite rich, and then put on a heavy top dressing of unleached ashes. I believe that nearly all trees flourish well on new lands. May we not take a hint from this fact, and by restoring to the soil what has been exhausted by cultivation, succeed well with all fruits suited to our latitude.

Since the time I applied the ashes I have not seen a black knot upon it. It was vigorous and healthy. But although it grew well and blossomed every year, it produced no fruit —all blasted. A friend from a neighboring county advised me to apply salt; I did so the next spring, covering the ground as far as the limbs extended nearly one quarter of an inch thick: that year, for the first time, the tree was loaded with fine fruit.

But now came another enemy which had never troubled me before—I mean that exceedingly provoking little insect, the curculio. The fruit set well, but less and less came to maturity, till in the summer of 1847 not a plum ripened. I tried the way recommended by D. THOMAS; I shook the insects from the tree and killed them, and destroyed the fallen fruit; but all to no purpose. Last spring I tried another remedy which I had seen recommended; with a half inch augur I bored about two-thirds through the tree and filled the hole with sulphur, covering it with a plaster of grafting wax. This is better than plugging, as the sulphur then comes in contact with the sap. Now for the result; the year before not a plum ripened, but last fall the tree was literally loaded with fine fair fruit. I state the simple facts; others may draw their inferences."

* Mr. DOWNING says he never knew trees, on such a soil to be attacked with the circulio.

[Does he not say that trees in a heavy soil are less subject to the attacks of the curculio than they are on a light soil?—ED.]

NORTH AMERICAN POMOLOGICAL CONVENTION.

The undersigned, a Committee of the above Convention, who were appointed at the meeting held in Buffalo last September to report such plans for the organization of future Conventions—should it be deemed advisable to hold them—as might be deemed necessary to carry out successfully the objects for which they were to meet, agreed, after consultation, as part of their plan, to appoint committees for each State, Territory, and the Canadas, whose duty it should be to report the results of their observations and consultations in relation to matters suggested for their action in a circular—(which was issued by us and sent to each one of them) —on the first day of the assemblage of the Convention, which was by unanimous resolution agreed, should be held in the autumn of 1849.

The Committee have had their attention called to an editorial in the Horticulturist for March, in which it is stated that the North American Pomological Convention is a defunct Convention, and that the State Committees have received the compliment from a Committee which does not exist, or by an authority unknown. Without intending in any way to comment on the article alluded to, the Committee think it their duty to remark that by a perusal of the report of the proceedings of the Buffalo Convention, it will be seen that the report of this Committee, making the Convention a National and a permanent one, was adopted unanimously; that it is entirely unconnected with the New York State Agricultural Society, and that the designation of the time and place for its next meeting, where the great fair of that Society is to be held, was done for the better accommodation of the public who are in the habit of attending it from all parts of the country, and also as a compliment to that Society, in acknowledgement of the great benefit they had conferred on Horticulture, by being the *first* to move in calling a National Pomological Convention. The Committee, owing to the hurried close of the Convention at Buffalo, had not time to concoct, or submit fully, their plans for the consideration of the Convention, and in doing it thus far afterwards, they conceive that they are carrying out the true spirit and intent of their appointment, and that their action will meet with the approbation of all concerned.

The Committee therefore hope that the gentlemen appointed will not be deterred by the article above alluded to, from attention to the several duties which have been submitted for their action, as the North American Pomological Convention will convene at Syracuse in the State of New-York, on the 14th day of September next, at 10 o'clock, A. M.—it being the day succeeding the closing of the annual fair of the New York State Agricultural Society.

Pomological, Horticultural, Agricultural, and kindred Societies, or Associations, throughout this Continent, are requested to send delegates to the Convention; and gentlemen resident in vicinities where no societies exist, who take interest in the advancement of Pomological science are also invited to attend.

J. D. G. NELSON, Indiana, *Chairman.*
JAMES DOUGALL, Canada.
HERMAN WENDELL, M. D., New York.
J. C. HOLMES, Michigan.
LEWIS F. ALLEN, New York.
F. R. ELLIOTT, Ohio.
N. GOODSELL, New York.

March, 1849. *Committee.*

NATIVE WINE.—Cincinnati is in rapid progress of becoming the great market of American wines. The vintage of 1848 will reach fifty-thousand gallons, equal to eighteen hundred quarter casks. The finer qualities are sold in bottles, and the Catawba wine of our favorite brands are sold off as fast as sent into market. These wines are manufactured without the addition of spirit, and have a character and flavor peculiarly their own.

[From the Horticulturist.]

DESCRIPTIVE NOTICES OF FIFTY RARE OR NEW PEARS.

BY ROBERT MANNING, SALEM, MASS.,

[We have much pleasure in publishing the following notes, and in calling the attention of pomologists and amateurs to them. Mr. MANNING's reputation as a pomologist is well deserved; for he unites enthusiastic zeal, excellent judgment, and sterling honesty,—qualities so rarely combined in *devotees* to any art: and he has the advantage of the experience of two generations. We have either tested in our own, or carefully noted in other gardens, many of the sorts he notices, and our opinion accords almost entirely with those expressed by him. ED.]

1. *Bergamotte Cadet.*—This pear has been cultivated for some years as Beurre Beauchamps; but that name not having been firmly established, it was thought best to substitute for it the one at the head of this notice, which is that adopted by the London Horticultural Society. I wish now to recommend a more extensive trial of it, as I do not think it has been as much cultivated as it deserves to be. It is rather under middle size; form roundish obovate: flavor very fine, sometimes excelling the Winter Nelis. Ripe the early part of winter. I do not notice the diversity in the ripening of this sort, mentioned in the London Catalogue.

2. *Beurre Keurick.*—I have now fruited this pear several years, and have had many specimens, some of which were very fine of their kind; but I do not think it entitled to be recommended for general cultivation. It ripens the first part of September.

3. *Beurre d' Angleterre.*—Very productive, but soon decays at the core.

4. *Beurre Adam.*—A new pear, not yet fully proved. It appears to resemble the *Bishop's Thumb.*

5. *Beurre of Bolwiller.*—A variety received from Dr. VAN MONS, which may fairly claim a place in the rejected list.

6. *Beurre Delbecq.*—The same remarks as were made on the last will apply to this.

Beurre Witzhumb proves identical with *Beurre Delbecq.*

7. *Bergamotte Parthenay.*—A winter fruit, lately imported from France; worthless as a dessert pear, and though good to cook, but being deficient in size, it is hardly worth cultivation for that purpose, while we have plenty of larger ones.

8. *Ambrosia* does not come up to the reputation given it in the books. It is not a melting, but a breaking pear, and does not ripen here before the first of September. It is commonly said to decay very soon; but I think it keeps full as long as most pears of its season. Tree of upright growth, making strong shoots, of a very dark, purplish color, thickly marked with white dots.

9. *Alpha.*—To my taste, this is one of the finest pears. It is sweet, and exceedingly fine grained, melting and juicy. The tree is a great bearer; and although the fruit does not hold on very strongly, those which blow off open so as to be full as good, or even better than the others. And I may here remark, that many of the autumn pears are as much improved as the summer fruit, by being taken from the tree before fully ripe.

10. *Aston Town.*—A good grower, making smooth, vigorous shoots, of a light gray color. Fruit rather small, with a long stem, and ripening the first of September, but so much inferior to many others of the same season as to be hardly worth growing.

11. *Beurre Van Marum.*—Hardly comes up to medium size, but is of very fine flavor. It appears to be allied to the Urbaniste. Ripe the first half of October. It is easily known, by the peculiar insertion of the stem in a small regular cavity. Stem long, slender and curved, with a little swelling at the bottom. Bears young and well, so that the shoots are soon thickly covered with fruit spurs. Leaves long, narrow, flat, and pointed at both ends.

12. *Henkel.*—Received from Dr. VAN MONS. It resembles the B. Van Marum in its early and abundant bearing, in shape and color, in the length and curvature of the stem, and in its likeness to the Urbaniste; but differs in being larger, a month earlier, and the stem being stouter. It ripens the first part of September, and is among the best of its season.

13. *Burgomaster.*—The true variety is very distinct from the Vicar of Winkfield. Of medium size, long pyriform; skin pale, yellowish green, sprinkled with russett; flavor very poor. The wood cankers worse than that of any other variety, without exception. Altogether, one of the most worthless.

14. *Brandes St. Germain.*—I think this must have been among the first originated by Dr. VAN MONS; as it is stated in *Prince's Pomological Manual*, published in 1831, to have been raised seventeen or eighteen years previously. It was comprised in the first lot of scions received from VAN MONS; but its great merits have remained unrecognised until quite lately. For several years past, it has proved one of the finest winter pears. Form oblong, pointed at the stem, which is always planted obliquely on one side; skin brownish yellow, often with much smooth russett; flesh rich and juicy, with a vinous flavor, resembling the St. Germain or Dix. Tree productive, and a tolerable grower. Foliage small and narrow, like the old St. Germain. It succeeds finely on the quince. Altogether, I think it a most desirable variety, especially when its season is taken into consideration; as we are deficient in good winter pears.

15. *Columbia.*—With me, this has proved rather unproductive, and very apt to blow off; and though large, fair and handsome, I cannot say much in praise of its flavor.

16. *Capucin*, (of VAN MONS.)—A very high flavored, juicy pear; skin of a dark brownish red; surface knobby.

17. *Caen du France.*—A rather singular looking, but handsome pear: form obovate, sometimes lengthened, and pointed at the stem; skin russeted, and thickly sprinkled with raised dots of darker russet, and often with a fine red cheek; medium size; flesh very fine, juicy and sweet; flavor resembling the Winter Nelis. Ripe in December and January. From Dr. VAN MONS.

18. *Coter.*—Another from Dr. VAN MONS, and a very fine one, among the first of those received from him; medium size; form regular obovate; skin pale green; flesh very fine grained, tender and melting, filled with a refreshing juice. Ripe in November; at which time there is none superior to it. The tree makes a round, compact head; young wood, short jointed, light yellow.

19. *Clara.*—Unworthy of cultivation.

20. *Cuvelier.*—Unworthy of cultivation.

21. *Doyenne Boussock.*—One of the most valuable additions to our list of fine new pears. It is a White Doyenne, on a much larger scale. Tree very vigorous, foliage large, thick and glossy. Last of September and first of October.

22. *Dundas.*—Exceedingly handsome, and pretty good; apt to blow down.

The *Parmentier* proves to be the same as Dundas.

23. *Easter Bergamot*—I do not think worth growing, either for dessert or kitchen use.

24. *Foster's St. Michael.*—Wood cankers badly, and the fruit is inferior to many others of its season,—the first part of September.

25. *Gilogil*—I have discontinued cultivating, on account of its unproductiveness.

26. *Gendeseim.*—Medium size, obovate, pale, greenish yellow, sprinkled with russet, melting, juicy, and of good flavor. A very strong grower on the quince. October.

27. *Flemish Bon Chretien.*—One of the best pears for cooking in the winter.

28. *Green Sugar.*—Unworthy of cultivation.

29. *Doyenne d' Hiver.*—This pear was a favorite with the late S. G. PERKINS, Esq., from whom it was received here. It is large, fair and productive; though not high flavored, it is sweet and juicy. I think it a desirable sort, particularly for market. It is the same as "Coffin's Virgalieu," which was received from France with the name lost, and thus designated from the name of the importer, and its resemblance to the White Doyenne or Virgalieu. Ripe early in winter.

30. *Wilbur.*—Medium size, obovate; skin of a dull yellowish color, sometimes almost covered with russet; flavor often decidedly first rate. A native pear, productive and hardy. Ripe in September.

31. *Limon.*—For one who loves a pear, full of rich, *sprightly* juice, there is nothing superior to the Limon, among the summer fruits.

32. *Elizabeth*, (*Manning's.*)—This very fine summer pear is one of the best growers on the quince. It bears young and well.

33. *Duchess of Orleans.*—One of the most perfect of pears. Tree vigorous,—making light yellow shoots, an early and abundant bearer; fruit very handsome, and of delicious flavor. It fruited here in 1845, for the first time in this country. Some of the specimens then produced were the finest pears I have ever tasted. Grows well on the quince. Ripe in October.

34. *Tyson.*—A very rich, sweet, summer pear, of medium size, and pyriform figure. The *Tyson* and *Rostiezer* are among the few pears which may be said to approach the

Seckel, in flavor. The growth of the tree is healthy and vigorous,—making a handsome top, resembling the Seckel; but taller. Ripe the last of August. A native of Philadelphia.

35. *Las Canas.*—Received from M. EMILIEN DE WAEL, of Belgium. It proves to be a very fine pear, of medium size, pyriform; skin pale yellow, often partly covered with thin russet; seeds very black; flesh juicy, very sweet and rich. Tree upright and vigorous, bears young and well. October.

36. *Paradise d' Automne.*—Quite distinct from the Beurre Bosc, though resembling it in general appearance. A very striking difference is observable in the flowers. The texture and flavor of the flesh are even superior to that magnificent pear. I consider it the most valuable addition to the list of fine new pears which has ever been introduced at the Pomological Garden. The growth of the tree is more vigorous than any other pear whatever. October.

37. *Citron des Carmes Panache,* or *Striped Madeleine.*—The difference between the fruit of this, and the common Madeleine, consists in the skin of the former being striped with light yellow, and the flesh being a little sweeter; wood short jointed, striped with dull red and yellow. Not being as vigorous as the common Madeleine, it is less liable to the blight. Of two trees, standing about three rods apart, the striped variety has never been in the least affected, though much younger than the common kind, which was badly injured. Both varieties ripen together.

38. *Doyenne d' Ete.*—A nice early pear, and very handsome; rather under medium size; form obovate; skin yellow in the shade, bright red next the sun; flesh juicy, and of pleasant flavor. Ripens the last of July, with the Madeleine, and is full as good. Bears very young; trees of two or three years from the bud are frequently covered with fruit buds, making it quite difficult to get any growth on them.

39. *Jean de Witte.*—A new winter pear, not unlike the Winter Nelis in size and flavor, and I think fully equal to it; form obovate, a little flattened; skin pale yellow. "No. 1482, of Van Mons," which I have before described and recommended, proves identical with *Jean de Witte;* as also, Nos. 1082 and 1602. The habit of the tree is very similar to the Seckel, with short jointed shoots and compact head.

40. *Plombgastel.*—This has fruited on scions received from J. C. LEE, Esq., who imported it from France: medium size, dull, greenish yellow and russet, in flavor about as good as the Bartlett. The tree makes very stout shoots, and grows well on the quince. September.

41. *Calebasse Monstreuse.*—A large obovate pear, tapering both to the eye and stem, very productive, and excellent for cooking. Winter. Its shape not being at all like that of a calabash, has created some suspicion that it may be incorrect. It was received from M. DE WAEL.

42. *Fantasie Van Mons.*—Worthless.

43. *Bruno de Bosco.*—Worthless.

44. *Hampden's Bergamot.*—Often very large and handsome; skin smooth and yellow. I have tasted specimens which I thought as good as the Bartlett. First half of Sept.

45. *Citron of Bohemia.*—I think this has been overrated. It is a breaking pear, ripe the first part of September, and is certainly inferior to others of that season.

46. *Marulis.*—A Belgian fruit; a strong grower, very productive, high flavored, and high colored, but rather small and dry. August and September.

47. *Johonnot.*—Exceedingly rich; in flavor and appearance resembling the Brown Beurre, from which it was not improbably raised. I do not know of any thing surpassing it in flavor. Ripe here in September.

48. *Angleterre of Noisette.*—Very distinct from the Beurre d' Angleterre. A large roundish pear, of a dark green color, with a dark brownish red cheek. I do not consider it yet fully proved; but so far as it is, it does not appear worthy of propagation. Further trial may develope some valuable properties, either as a cooking or dessert fruit.

49. *Jalousie de Fontenay Vendee.*—Productive, and very fine flavored.

50. *St. Andre.*—Very delicious; wood somewhat apt to canker.

ROBERT MANNING.

Pomological Garden, Salem, March, 1849.

SPARE minutes are the gold dust of time; and Young was writing a true, as well as a striking line, when he affirmed that "Sands make the mountain and moments make the year." Of all the portions of our life, the spare minutes are the most faithful in good or evil.

Editor's Table.

TO READERS AND CORRESPONDENTS.—Severe illness is our only apology for any apparent deficiency in the matter or arrangement of this number of the Farmer. The same cause has prevented us from attending to various inquiries—particularly those requesting answers by letter.

OUR ADVERTISING COVER is discontinued for the present. As there is but one steam press in the city, suitable for printing the Farmer and Cover, we find it impossible to publish both, and mail as promptly as is desirable.

ADDRESS AT THE STATE FAIR.—The Albany Journal states, on the authority of the Secretary of the State Agricultural Society, "that Prof. JAMES F. W. JOHNSTON, of Durham, England, has accepted the invitation of the Executive Committee, and will deliver the annual address in September next, at Syracuse. Prof. JOHNSTON is one of the most distinguished agricultural chemists in Great Britain, and we doubt not the announcement of his name for that occasion will secure the attendance of many distinguished gentlemen from our country, as well as from the British Provinces."

GEN. TAYLOR has accepted an invitation to attend the next Fair of the State Ag. Society, at Syracuse.

HON. HENRY CLAY is to deliver the address at the Ohio Fair—to be held in Cincinnati, on the 5th, 6th and 7th of September.

STATE AG. SOCIETIES IN THE WEST.—We are pleased to learn that State Ag. Societies have recently been organized in Michigan and Wisconsin. We will endeavor to give names of officers, &c., in a future number. The Legislature has granted a charter to the Mich. State Ag. Society, and appropriated $400 towards paying premiums. The fee of membership is $1, and there are already over one hundred members. J. C. HOLMES, Esq., of Detroit, is Secretary.

AGRICULTURAL SCHOOL COMMISSIONERS.—Under the resolution of the Legislature for the appointment of a Board of eight Commissioners, to mature a plan for the establishment of an Agricultural School, Gov. FISH has made the following appointments:

Joseph Blunt, New York, 1st district.
A. J. Downing, Orange co., 2d district.
John P. Beekman, Columbia co., 3d district.
Samuel Cheever, Saratoga co., 4th district.
Edmund Kirby, Jefferson co., 5th district.
Adrian Lott, Chenango co., 6th district.
Jas. S. Wadsworth, Livingston co., 7th district.
Wm. Risley, Chautauque co., 8th district.

FARMER'S BAROMETER.—We are indebted to Mr. JNO. KEDZIE, for a very neat and accurate Barometer, manufactured by the BROTHERS KENDALL, New Lebanon, N. Y. Every farmer will find a good barometer a valuable aid in his calling, and those made by Messrs. KENDALL are superior. For sale by J. KEDZIE, No. 11 State-st., Rochester.

A DICTIONARY OF THE GERMAN AND ENGLISH LANGUAGES: by G. J. ADLER, A. M., Prof. of the German Language and Literature in the University of the City of New York. D. APPLETON & Co.

THIS is probably the best work of the kind published, to aid the learner of the German language. Its basis is Flugel's German Dictionary. It contains about 30,000 more words than Flugel's work, and will be found just the thing for the reader of German agricultural and scientific works. The lists of abbreviations, irregular verbs, and its synonyms will greatly facilitate the inter-communication between the German and American or English mind. The typographical execution is elegant.

THE WHEAT CROP of Western New York, so far as we have been able to learn, has withstood the severity of the winter remarkably well, and promises a fair yield. Late Michigan and Wisconsin papers speak favorably of the wheat crop in those States.

RYE GRASS.—"H. R." is informed that Italian Rye Grass may be obtained at the Genesee Seed Store, in this city—price $3 per bushel. Rye Grass does not thrive well in our long hot summers; nor can it be put in competition with Timothy. Indeed there can be no excuse for the exchange. If for meadows, sow the large clover, which is in season for mowing at the same period with Timothy.

The Osage Orange may stand our winters; but whether it is proof against field mice, which are the great enemy of live fences in all snowy regions, is yet to be settled.

PREMIUMS FOR SUBSCRIBERS TO THE FARMER

Below we give the award of Prizes for subscribers obtained to the Farmer up to the 20th of April. In addition to the names here given a large number of persons have procured very handsome lists — to whom we are greatly indebted. It is a source of regret that we cannot afford to distribute a greater amount in premiums than was originally offered — for we are aware that many other friends and agents of the Farmer have devoted much time and attention to augmenting its circulation. We hope that we shall be able to offer, another year, such a list of Prizes as will prove more acceptable.

1st. To E. C. Bliss, Westfield, Chautauque Co., N. Y., for 238 subscribers—$40.

2d. To Silas H. Swetland, Jonesville, Saratoga Co., N. Y., for 237*—$30.

3d. To Samuel E. Norten, Phelps, Ontario Co., N. Y., for 236—$20.

4th. To Silsby & Keeler, Seneca Falls, Seneca Co., N. Y., for 159—$12.

5th. To John Davis, Birmingham, Oakland Co., Mich., 152—$6.

6th. To J. H. Stanley, Le Roy, N. Y., 149—V. W. Sunderlin, Dundee, N. Y., 125—Wm. Lyman, Moscow, N. Y., 121—J. D. Stone, Clyde, N. Y., 109—Apollas Kent, Amboy, Ohio, 104—for the five next highest list, each $4 in bound volumes of the Farmer, (or, though not first offered, other books if preferred.)

7th. To S. B. Wise, Jefferson, Greene Co., Pa., 85—E. F. Munson, Oberlin, Ohio, 81—B. Farr, Albion, N. Y., 75—E. S. Marvin, Rollin, Mich., 62—H. J. Ray, Livonia, N. Y., 58—for the five next highest lists, each $3 in bound volumes of the Farmer.

8th. Oscar Warren, Willink, N. Y., 57—Moses Eames, Rutland, 57—H. Frisbie, Holley, 54—J. M. Swart, Quaker Street, 52—Jacob Boyer, Pittsburg, Pa., 51—O. C. Comstock, Marshall, Mich., 51—S. Lee, Camillus, 50—C. Fenton, Crown Point, N. Y., 50—C. Leet, Harbor Creek, Pa., 49—D. P. Chamberlain, Hudson, Mich., 48—J. B. Lowell, Yates, N. Y., 46—for the next ten highest lists, $2 each in bound volumes of the Farmer.

* Since the above was made out we have received the following despatch, by Telegragh, from Mr. Swetland: "On account of some pilfering in the post office at ————, please Telegraph to me immediately how many names you have received from me. The number should not be less than 280." If Mr. S., has mailed remittances which have not reached us, it may change his from the second to the first premium.

Monroe County Agricultural Society.

An adjourned meeting of this Society will be held at the office of the Genesee Farmer, in Rochester, on the SECOND TUESDAY (the 8th day) of May instant, for the purpose of making out a Premium List for the current year, the appointment of Judges, and the transaction of other important business. A full attendence of the members is desired.

May 1, 1849. JOSEPH ALLEYN, *Sec'y.*

Seymour's New Drill.

THIS is one of the latest improvements in Drilling Machines, and is believed to be better adapted to the wants of the farmer in the line of a Seed Drill than any other before the public. Its operation is not only correct in drilling wheat, but also in all other grain,—such as peas, beans, corn, rye, oats, barley, &c. &c.

Nor is this all: Any desired quantity of lime, plaster, ashes or bone dust may be mixed with the seed and all deposited in the earth in the most correct manner. *More yet:* When the farmer wishes to plant corn, beans or any other seed in hills both ways, this is readily done. *Something more yet:* Its construction is such that the drill teeth, and all the fixtures necessary for drilling and not needed for broad-cast sawing, can be removed in five minutes—and a complete broad-cast machine is left, ready for sowing any kind of grain broad-cast.

Four sizes may be had. The smallest, with five teeth, is a very easy machine for a light horse and convenient for planting two rows of corn at once, 3 feet apart—one with 7 teeth for 1 or two horses—one with 9, one with 11 teeth, each for two horses. With either of the two large sizes three rows of corn may be planted at once.

The subscriber, believing the farmer will be better paid for his money in purchassng this instead of any other similar machine in the country, would invite those desiring an article of the kind, to examine his machine before they purchase elsewhere. All who would be sure of one of these machines as early as wheat-sowing next fall, should send their orders as soon as the first of June.

SEYMOUR'S BROAD-CAST SAWING MACHINE is also kept on hand. This is far superior to any thing of the kind ever known in the United States. It sows *correctly* all kinds of grain, from peas to grass seed. Also, plaster-lime, salt, ashes, bone-dust, &c., &c. It is drawn by one horse, sows ten feet wide, and is furnished with an easy seat, on springs, for the driver. Drill teeth are also added to this if desired, converting it into a drill at pleasure. This machine has been recently much improved. All communications post paid will meet with prompt attention.

N. B. A few responsible agents are wanted to sell the right for these machines in distant territory. P. SEYMOUR.

East Bloomfield, Ontario Co., N. Y., May 1, 1849. [5-1t]

Hussey's Reaping Machine!

THE Subscriber would respectfully call the attention of Farmers to the following correspondence in relation to Reaping Machines. It is not so much the question, at the present day, whether the Wheat can be cut with economy by Machinery, as it is what Machine should the Farmer purchase to cut his Wheat.

The subscriber will leave the annexed correspondence to answer that question, and only remark, that he builds his Machines in Auburn, Cayuga County, N. Y., at the extensive manufacturing establishment of BEARDSLEY, KEELER & CURTIS.

☞ Those in want of these Machines are requested to send in their orders at an early day, that we may make our arrangements accordingly. All orders to be addressed to

May 1, 1849. THOMAS R. HUSSEY, Auburn, N. Y.

CERTIFICATES.

Auburn, February 17, 1847.

Mr. Thomas R Hussey:—I have used one of your Grain Reapers for three years, which cuts five feet. I can cut fifteen acres in one day, and in doing so, I gather the grain as clean as it can be done with a sickle. I much prefer it to any other mode of cutting grain. J. M. SHERWOOD.

Mr. Thomas R. Hussey:—Sir: I have used your Reaping Machine for six years, and consider it one of the most profitable Machines that can be used on a farm, and could not be induced to do without one. I can cut from fifteen to twenty acres in one day, and can get lodged grain better than in any other way. I can recommend this Machine to all farmers, as a cheap and expeditious way of getting grain. Scipio, March 6, 1847.

ISAAC AKIN.

[Many other certificates, &c., are omitted for want of space.]

☞ Rapalje & Briggs, of the Genesee Seed Store and Ag Warehouse, Rochester, are agents for the sale of Hussey's Reaper, and will promptly attend to all orders.

J. W. Sherman's First Premium Grain Drill and Cultivator and Broadcast Seed Sower.

COMBINING three of the most useful farm implements. Superior to any other grain and seed planter for all kinds of grain or seeds; also a superior corn planter. It will sow broadcast, or in drills or hills, and cover grain, and sow plaster, ashes and all fine manure, broad-cast—or will drill it in the rows in such quantities as desired. As a Field Cultivator it works well and is believed to be superior to any other, on all kinds of ground. It sows or plants from the smallest to the largest grain and seeds, accurately. It is the most easily managed; all the tubes can be raised or lowered, or either of them, without stopping the team. Any person capable of managing a team can use this machine and alter it from one quantity to another in one minute. It is durable, permanently constructed, and not liable to get out of order. We do not boast of inventing three drills. We happened to get a good machine the first time, which is more than can be said (truthfully) of some that have invented more, who boast of their worthless articles. We cannot tell of getting 500 made this season for Western New York; it takes time to make a good article. But we will *try* to fill all orders from Western New York and other sections, and warrant our drill the best in use.

We do not tell of selling $25 cheaper than others, for we think we can sell all we can make at a fair price, and we believe our farmers are willing to pay such a price for a good article. We promise to sell as cheap as any other that has a reliable machine, that does the work up right. All we ask of those wishing Planters is to examine for themselves. We are also ready to meet any inventor of Drills on the soil. Boasting on paper is one thing; demonstration on the soil another. All we ask is a trial.

To any one wishing further information we will take pleasure in sending a descriptive sheet. We would conclude by just stating that our machine received two first premiums last fall, at the State Fair at Buffalo, on an imperfect machine, not finished. We subjoin the certificate the Committee kindly gave us:

"We the Committee on Farming Implements, No. 1, having J. W. Sherman's Field Drill and Cultivator under consideration, consider it the best implement of the class that has been presented, and have returned it as being entitled to the highest Premium. *Buffalo, Sept.* 7, 1848. A. OSBORN, *Ch'n.*

I have received the Premium in three Diplomas.

All communications should be sent to me at this place and will be promptly answered and attended to.

We shall want a number of agents to sell machines and rights to commence soon. J. W. SHERMAN.

Ontario, Wayne Co., N. Y., April 15, 1849. [5-tf]

An Elegant Country Residence and Farm for Sale.

CONTAINING one hundred and seventy-five acres of first rate land, situated on the west shore of Cayuga Lake, two miles south of Cayuga bridge, in the town of Seneca Falls, Seneca county. There is a large brick mansion with a two story kitchen adjoining, with wash and wood house attached; out-buildings, barn, shed and carriage house; a lawn and garden in front, enclosed with a handsome fence; apple and peach orchards, with a number of cherry, plum and pear trees. The stock, crops in ground, and farming utensils, &c., will be sold with the farm. Possession given immediately. For further information, price and terms of payment, application can be made to the subscriber, on the premises, or by letter addressed to him, Oakwood Farm, near Cayuga Bridge; or to D. D. T. MOORE, at the office of the Genesee Farmer, Rochester.

[5tf. JOHN OGDEN DAY.

Hathaway's Patent Fuller and Cleaner,

FOR Cleaning all Kinds of Grain, Clover and other Seeds. Patented July 5, 1848. These Machines embrace most essential improvements and have been thoroughly tested by many intelligent wealthy farmers in different parts of the State, who speak of their operation in the hi hest terms of praise, and express their entire satisfaction with them.

Hathaway's Huller and Cleaner is warranted to Thresh and clean Wheat, Barley, Oats, Rye, Peas, Beans and Buckwheat without injuring the berry. It will also thresh and clean from the straw fit for use or market two bushels of CLOVER SEED per hour, on an average, without rotting the clover straw. Timothy, Mustard, and other small seeds can be cleaned with it, with unprecedented speed and celerity.

These machines will make a better and faster separation than any others now in use, and a saving of more than 150 per cent. in the expense of cleaning clover seed and in the saving of the seed compared with any other.

They are cheap in price—simple in construction—durable in materials—easily kept in order—handled or removed. There is nothing now in use resembling, or that can compete with them.

They can also be used as Fanning Mills, by hand power, in a barn or elsewhere.

Refer to the gentlemen whose names are attached to the following certificates. Many others might be added if deemed necessary; but those named have the machines in use and know what they recommend.

CERTIFICATES.

I hereby certify that I have used one of Hathaway's machines for three years past, and have thrashed and cleaned from three to four hundred bushels of wheat per day and have no hesitancy in saying that they will thrash and clean from three to four bushels of clover seed per hour. I have thrashed and cleaned eighteen bushels in five hours. I confidently recommend them to my fellow agriculturists.

Rock Stream, March 1, 1849. HORACE HENDERSON, J. P.

Mr B. G H. Hathaway—Dear Sir: The machine I purchased of you in November last, operates to my entire satisfaction. I have thrashed and cleaned from the straw twenty-five bushels of clover seed in a day; and from the chaff, five bushels per hour—also, from the straw, three bushels per hour. In thrashing and cleaning of grain, it works admirably.

Canandaigua, March 7, 1849. REUBEN J. SUTHERLAND.

Mr. Hathaway—Dear Sir: The machine I purchased of you, in December last, operates as you recommended; I have thrashed and cleaned from the straw, from fifteen to eighteen bushels of clover seed per day on an average; also, in thrashing and cleaning of grain, it gives good satisfaction SOLOMON ERNST.

Lockport, Feb. 18, 1849.

Applications for the right to construct and vend these machines in any part of the United States, as well as all inquiries and applications for machines will be attended to as promptly as possible. B. G H. HATHAWAY.

Rock Stream, Yates county, N. Y., April 18, 1849.

Monroe Nursery, on the Ridge Road.

THE contract between the subscriber and Naaman Goodsell, for the cultivation and management of the Monroe Nursery being now rescinded, and the relation growing out of it dissolved, the undersigned is now prepared to execute orders for trees, shrubbery, &c.

The undersigned is determined by his industry and attention to business, and by the care he shall use in cultivating the different varieties of fruits, to merit the confidence of his friends and the public.

The Monroe Nursery has been favorably known for a great many years, and has been in the possession of the subscriber for the last five years, during which time he has been to an enormous expense in refitting and restocking the premises with all the most desirable and modern variety of fruits. He solicits a share of the public patronage. CHARLES POWIS, Proprietor.

Greece, April 5th, 1849. [5-tf]

Seeds and Implements.

GENESEE SEED STORE AND AG. WAREHOUSE—Irving Hall, opposite the Eagle Hotel, Buffalo-st—Having purchased the Agricultural and Seed department of Messrs. Nott, Elliott & Fitch, we intend going more extensively into all the branches of our business. We shall keep constantly for sale, all kinds of Imported and American Field and Garden Seeds, and a large assortment of the most approved Implements and Machines used by the Gardener and Farmer. We manufacture Pennock's Wheat Drill, (the most perfect and substantial Drill in use,) the celebrated Massachusetts Eagle C Plow, Drags, Cultivators, &c., &c., all of the most approved patterns and construction, and keep a full supply of all the Boston and Worcester Plows, Sub-soil, Delano's, Burrall's Shell Wheel, Anthony's Patent Index, &c., &c.

In addition to our stock of implements, &c., we think we can say with perfect confidence, we have one of the largest, most carefully grown and best selected stock of FIELD, GARDEN and FLOWER SEEDS in the country, including several kinds imported from Europe. Farmers, Gardeners and Dealers would consult their interest, and perhaps insure good crops, by calling at our establishment. RAPALJE & BRIGGS.

Rochester, May 1, 1849.

The Celebrated Horse Morgan Eagle!

THIS truly celebrated Horse will stand for Mares this season, commencing April 30th, at A. S. Davis', in East Rush, on Mondays and Tuesdays; at Sherwood's Tavern in Pittsford, on Wednesdays; at Peter Culver's, in Bendon on Thursdays; and at Richard Peck's, two miles east of Lima village, on Fridays and Saturdays.

MORGAN EAGLE was purchased in the fall of '47, in Tunbridge, Vt., by J. Henderson, at a great price, for the express purpose of improving the stock of Horses of this country. He is about 16 hands high and well proportioned; is a bright bay, and for symmetry and action cannot be surpassed.

Morgan Eagle and the celebrated trotting Mare Lady Sutton, of New York, were sired by Old Morgan Eagle, of Vermont.

PREMIUM!

We will award a premium of $25 for the best Colt sired by Morgan Eagle this season. Competitors for the premium must exhibit their Colts on the 2d Tuesday of October, 1850, at East Rush. Judges to be selected by owners of the Colts.

HENDERSON & AUSTIN.

Honeoye Falls, April 23d, 1849. [42m]

Albany Seed Drill and Corn Planter.

THIS is in form like a harrow. The operator to king the handles walks off erect. It makes its furrow, measures the quantity of seed, space the distances between the hills, covers the seed, and completes the whole work at one operation. It can be used by one man, or with a man and a horse, as the state of the ground may require.

For drilling in small seeds for root crops it is not excelled. As all such seeds are sure to be dropped by the action of revolving brush over-plates, with holes in them of the proper size, thereby dropping carrot, parsnip, salisfy, &c., with equal precision, whether in large or small quantities. A large number were made and sold the past season with entire satisfaction to purchasers. In several instances from 10 to 13 acres per day of corn were planted by one man and a horse in the most perfect manner.

The manufacturer has been awarded the highest premium and diploma by the New York State Agricultural Society. Also by the Mass Charitable Mechanics' Association and the Worcester Co. Mass. Mechanics' Association. The subscriber has made some important improvements in the machine, and offers it wholesale and retail at the Albany Agricultural Warehouse and Seed Store, No. 369 Broadway, Albany. ☞ Catalogues gratis.

HORACE L. EMERY.

Albany, March 1, 1849. [3-1t]

Erie County Nursery, Buffalo, N. Y.

THE Proprietor of this Old Establishment, offers for sale this spring a large and fine assortment of Fruit and Ornamental Trees, Flowering Shrubs, &c., at wholesale or retail, and at low prices.

Our stock of Fruit Trees embrace the leading and best sorts now cultivated, mostly propagated from bearing trees, growing upon our own premises, and are vigorous and thrifty. The Northern Spy Apple (new?) we have cultivated in our collection for nearly twenty years, and sell them the same price we do other varieties, when an assortment is ordered. Our stock of English Cherries, (embracing about 40 varieties,) is very large, and the trees cannot be surpassed in size or beauty of growth.

Our whole stock of trees have been propagated with great care, and will be sold on the most reasonable terms. Nurserymen will be supplied at a great discount from catalogue prices.

All orders will meet with prompt attention and every article will be distinctly labelled, securely packed, and forwarded agreeably to order.

Catalogues furnished gratis, on application.

A. BRYANT & SONS.

Buffalo, N. Y., April 2, 1849. [4-2t*]

Rochester Commercial Nursery, East Avenue.

THE Subscribers offer for sale this season a fine assortment of FRUIT TREES, comprising the best now cultivated. They are very thrifty, and will be sold at wholesale or retail for cash or approved credit at reasonable prices.

NORTHERN SPY, EARLY JOE, HAWLEY and all other choice varieties of apples at *regular Catalogue Prices.* ☞ We do not charge extra prices for fruit trees because the varieties are first rate, and we endeavor to cultivate none other.

BISSELL, HOOKER & SLOANE.

[3-3t] City Office No. 8 Arcade.

Rochester Novelty Works.

WE are manufacturing a great variety of SHELF HARDWARE and heavy goods in this line, which we keep constantly on hand, all warranted, which we will sell to dealers lower than they can buy them in New York. We will also make to order any description of CASTINGS, small or large, for Agricultural Machinery, patent articles, &c., of brass or iron. We are prepared to anneal small work so that it can be finished or drilled. Our castings are very superior in style and finish, almost as smooth as if polished. All orders properly attended to, and patterns furnished if required. SMITH, BADGER & CO.,

Office and Depot No. 3 Buffalo-st.

Rochester, Monroe Co., N. Y., April 1, 1849. [4-3t]

Short-Horns at Auction.

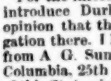
THE subscriber being about disposing of 50 acres of his farm for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one half of his present herd) on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearlings, two year and three year old heifers and cows; and 11 young bulls, from 10 months to 2¼ years old. Great care has been observed, and considerable expense incurred in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the N. Y. State Ag. Society, and the N. Y. American Institute, attest the estimation in which this stock is held wherever it has been exhibited for competition. About 8 head of the above cattle are a purchase made from E. P. Prentice, Esq., of Albany, last May being all the Short Horns of that gentleman, and the product of his four selected cows, retained at his public sale. These animals have the strain of blood of the herd of Mr. Whittaker, of England from whom Mr. Prentice made his principal importations. The other part of the lot of young animals partake largely of the blood of the celebrated herd of Thos. Bates, Esq., of Yorkshire, England, from whom my importations have been derived, and are mostly of the get of my imported bull Duke of Wellington, and my prize bull Meteor. The heifers and cows are and will principally be in calf with these bulls.

For the information of Southern gentlemen who may desire to introduce Durham stock in that region, and who entertain the opinion that that climate is uncongenial to its successful propagation there, I here introduce an extract from a letter I received from A. G. Sumner, Esq. editor of the South Carolinian, dated Columbia, 25th January, 1849—"The bull you sold Col. Hampton of this State gives him great satisfaction: he is a fine animal, and I only wish you could see some 20 head of his get now in his yard. They are the most superb yearlings ever bred at the South."

Further particulars, and the pedigrees of the stock will be issued one month previous to the sale. A credit from 6 to 18 months will be given.

Troy, N. Y., April 1, 1849 [4-3t] GEO. VAIL.

The Norman Horse.



THE celebrated Norman Stage or Diligence Horse, "LOUIS PHILLIPE," will stand the ensuing season at the Spring Mills, in the Village of Union Springs, on the east side of Cayuga Lake, ten miles south west from Auburn. Louis Phillipe was raised by Edward Harris, of Morristown, N. J., from full-blooded parents, selected in France, and imported by himself, and is a perfect specimen of that class of horse, a class celebrated for their quick powerful action, great hardihood and long life. His color is a beautiful dapple gray with a splendid heavy flowing mane and tail. He is 15 hands high, 5 years old, and weighs about 1150 pounds.

THE "CAYUGA CHIEF."

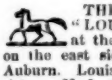
At the same stand will be found this noble Horse of the Surprise and Childers' descent. A beautiful dappled bay colt just coming 5 years, over 16 hands, of powerful close make, round and admirably proportioned.

Both these horses show a fine stock of colts. Gentlemen sending mares from a distance may be assured that they will have such attention as they desire and on the most reasonable terms.

Terms—$5 at the 1st leap, and then $5 to insure, payable on the 1st of 3d month (March,) following.

Communications may be addressed to ROBERT B. HOWLAND, Union Springs, Cayuga Co., and will receive prompt attention. [4-4t]

The Genuine Morgan Horse, Gen. Gifford,



WILL stand for mares the ensuing season, on Mondays and Tuesdays at the stable of Geo. A. Mason, two and a half miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; Saturdays at the stable of D. A. Munro, in Belliste

TERMS—$10 to insure. Mares that are not placed directly in in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers for 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and in style of action, *General Gifford* more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits. General Gifford was sired by the Gifford Morgan, his dam a pure Morgan. A full description of the origin of the Morgans, and pedigree of Gifford Morgan, may be found in the Albany Cultivator for 1846 page 19.

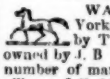
April, 1849. [4-3t] MUNRO & MASON.

Agricultural Implements and Mechanics' Tools.

I AM now manufacturing a few of those MANURE FORKS so much sought after by the FARMERS. Also, *Hay* and *Straw Forks* of all kinds warranted. Also, a full supply of *Spades, Shovels, Hoes, Axes, Scythes*, and almost every kind of MECHANICS' TOOLS always can be found at my store. No 3 Buffalo-st., first building west of Main-street Bridge, Rochester.

[4-3t] R. D. BARTON.

The Imported Horse, Consternation,



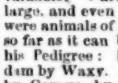
WAS bred by MATHEW HORNSEY, Esq., of Stilton ham, Yorkshire, England, in the year 1841. He was imported by T. C. Arbott, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq., of Syracuse, and will serve a limited number of mares the ensuing season at his own stables near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences will be provided for mares from a distance at two shillings and sixpence per week. No mares taken except at the risk of the owner.

Consternation is a beautiful unfading dapple brown color, stands 15 hands and 3 inches high, and is a very sure foal getter. He is remarkable for his vigor of constitution, his developments of bone and muscle, and his intelligent, kind and docile disposition. He is compact and short legged for a thorough-bred horse, yet of a *rangey* and majestic figure. His chest and flank are deep and full. His action is graceful, but at the same time proud and commanding. But what is perhaps of more importance, he is descended through all the generations that are recorded in the English stud books from horses of great distinction and of the purest blood. There is no horse living that can boast a more illustrious pedigree. His immediate ancestors were of uncommon size and elegance of figure. Confederate, although an eminently successful race horse was kept by his breeder, Earl Fitz William, to get carriage horses and hunters, for which he proved very valuable. Curiosity, the dam of Consternation, was equally large, and even handsomer than Confederate. All his ancestors were animals of good disposition and entirely free from blemishes, so far as it can be ascertained. The following is a brief copy of his Pedigree: By Confederate; dam Curiosity, by Figaro, her dam by WAXY. Confederate was bred by Earl Fitz William; got by Cornus, by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of *Mrs. Harvey*, by English Eclipse, &c., &c., &c.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Esq., Oneida Castle, Henry Rhodes, Trenton, A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms—$5 in advance, and $5 additional if the mare is got in foal. [4-3m] J. B. BURNET.

The Valuable Horse, Young Morgan,



WILL stand the ensuing season on Mondays, Tuesdays and Wednesdays at the stable of the subscriber near Clyde; on Thursdays at the stable of Abner G. Gillett, in Junius; on Fridays and Saturdays at the stable of J. Landon, in Lyons.

Terms—$8 to insure a foal.

Young Morgan is of a bright bay color, without white, 16 hands high, and weighs 1200 pounds. He will be four years old next July, and is not surpassed by any horse in this State. He was sired by Morgan Tiger, owned by Wm. May, of Palmyra; his dam was Noah Yates' Beauty, got by Austin's Duroc.

Clyde, April 1, 1849. [4-3m] J. M. GILLETT.

BOOKS ON AGRICULTURE, HORTICULTURE, &c.

For Sale at the Office of the Farmer.

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[In consequence of the continued absence of our engraver we are unable to give several illustrations intended for this number.]

Market Prices of Agricultural Products.

New York, April 27—7 P. M.

FLOUR & MEAL—Foreign news had a favorable effect upon the market for Western flour and the sales in most instances were at an advance of 6¼c. per bbl.; the range is 4.75 *a* 5.12 for common to good brands of State and mixed to very good Western. Pure Genesee 5.62 *a* 75. Sales 4,000 bbls. Included in sales were 1,000 good Ohio at 5.18 and 1100 do. common State, part Troy at 4 75. Rye flour steady. Sales 400 bbls. at 2.75a2.81. Meal firmer. 300 bbls. Jersey sold at 2.18 afloat.

GRAIN—Fair milling demand for wheat; prices below the views of holders. Sales 400 bu. Genesee at 1.25. 1,000 Ohio on private terms and 6,000 white Pa. at 1.18. Sale of 7000 bu. Rye at 57 delivered. Barley—sales 4,000 bu. prime two-rowed, part on private terms and part at 63¾. Corn about 2c. better. Some 20,000 bu. sold at 50c. for heated N. O., 54 *a* 56 for mixed to a very good white southern. Oats without change.

PROVISIONS—Pork dull and heavy. Sales 400 bbls. at $10.12 *a* $10.18 for mess, and $8.25 for prime. 500 bbls. sour sold at $9.25 and $7.25 for mess and prime. Beef, no change, with small sales. Lard is in fair inquiry. Sales 500 bbls. and tierces at 5¾ *a* 6¼—the latter for strictly prime. Butter and cheese dull, and without change.

Rochester, April 27, 1849.

IN FLOUR there is hardly any thing doing. One or two sales of 2 or three hundred bbls. have been made during the past week at $5.

GRAIN—Wheat $1.08. Corn 44c. Rye 53. Oats 29.

SEEDS—Clover $3.75 *a* $5. Timothy $1.50 *a* $2.25. Flax $1.

PROVISIONS.—Pork (mess) $12 per bbl. Beef $4 to $5 per cwt.—mess $7 *a* $8 per bbl. Butter 10 *a* 12 cts. Cheese 6c. Eggs 9c.

IN ALBANY, April 27, flour was quoted at $4.75 *a* $5 for common to good State and Western—and $5.50 *a* 5.75 for pure Genesee. Oats 36 *a* 37 cts.

Agricultural Warehouse and Seed Store at Buffalo.

AT the request of numerous friends, we have opened an Agricultural Warehouse and Seed Store, and have made such arrangements as will enable us to keep on hand a large and full assortment of implements of any useful kind.

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